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**PRELIMINARY ASSESSMENT/  
VISUAL SITE INSPECTION**

**OHIO RUBBER COMPANY  
WILLOUGHBY, OHIO  
OHD 004 222 378**

**FINAL REPORT**

US EPA RECORDS CENTER REGION 5



458832

**Prepared for**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Waste Programs Enforcement  
Washington, DC 20460**

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## EXECUTIVE SUMMARY

PRC Environmental Management, Inc. (PRC) performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Ohio Rubber Company facility in Willoughby, Ohio. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included as Attachment A to assist in setting priorities among RCRA facilities for corrective action.

The Ohio Rubber Company (Ohio Rubber), a division of Eagle Picher Industries, ceased operation at the Ben Hur Avenue facility on October 18, 1991. The facility manufactured rubber automotive parts, primarily rubber mats. The facility generated and managed the following waste streams: spent halogenated solvents (F001), spent acid waste (D002), paint wastewater, latex- and solvent-based paint sludges (F005), condensate wastewater, wastewater sludge (F005), solvent/water sludge (F005), and water/solid waste (D001).

The Ohio Rubber facility has operated at its current location since the early 1900s. The facility occupies 57 acres in an industrial area and currently employs about 10 people. During past peak operating periods, the facility employed approximately 750 people. The facility's regulatory status is that of a large quantity generator with less-than-90-day storage of wastes on site.

In 1981 the facility was permitted by the state of Ohio as a treatment, storage, and disposal (TSD) facility. In 1985 Ohio Rubber requested withdrawal of the facility's permit without completion of closure requirements. EPA notified Ohio Rubber that closure would be required. In 1986 the Ohio Environmental Protection Agency (OEPA) withdrew Ohio Rubber's waste installation and operation permit and granted Ohio Rubber the status of generator only with less-than-90-day storage. Eagle Picher notified OEPA that the facility would be ceasing operations in November, 1991.

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The PA/VSI identified the following seven SWMUs at the facility:

Solid Waste Management Units

1. Surface Impoundment
2. Old Drum Storage Area
3. New Drum Storage Area
4. Underground Waste Storage Tank
5. Tank Farm
6. Satellite Accumulation Area
7. Wastewater Treatment Plant

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Area of Concern

1. Chemical Warfare Burial Site

The potential is low for a release of hazardous constituents to ground water, surface water, air, and on-site soils from most SWMUs at this facility. The facility has been inactive since October 18, 1991. There have been no documented releases to ground water or surface water from the facility, and most SWMUs have secondary containment. Ground water is not used as a drinking-water source for the area. A small, unnamed stream flows at a distance of about 1,000 feet north of the facility through a nearby wetland to the Chagrin River, located 0.2 mile from the site. The Chagrin River flows into Lake Erie, which is the primary source of drinking water for the Cleveland area.

There is evidence that releases to air may have occurred from the reclaim oil used in the reclamation process. Over the years, some area residents have complained of odors emanating from the plant. The odors were attributed to the aromatic components in the reclaim oil used in the rubber reclaiming process. The facility took action each time to mitigate the possibility of a recurrence of the release. Eventually, the process oil was changed to one containing a lower concentration of aromatics, a move that reduced the odor level.

The probability that there have been releases of hazardous constituents from SWMU 1 to ground water and on-site soils is moderate, and to air is low to moderate because the unit lacked containment. During the period of operation, 1974 to 1977, the small amount of solvent entrained in the condensate from the blowdown of the autoclaves was left in the surface impoundment after evaporation of the liquid.

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The probability that there have been releases of hazardous constituents from SWMU 2 to on-site soils is moderate because the unit lacks containment. The unit has not been operational since 1986, but when it was in operation, 55-gallon drums of waste were stored either directly on the soil or on pallets on the soil. The probability that there have been releases of hazardous constituents from AOC 1 to on-site soils is moderate. There is a possibility that canisters of mustard gas were buried at the site during World War I. Canisters discovered during construction at the facility in the 1950s were removed by the Army. The content of those canisters was never made known to facility representatives. The soil is a clay mixture. The potential of past releases to ground water from SWMU 2 and AOC 1 is low to moderate because of the moderate potential of past releases to on-site soils, which would provide a source for ground-water contamination.

Receptors of potential releases at the facility are primarily residents and workers in the Willoughby area. Since the plant is no longer operational, there are no on-site workers. A 6-foot chain-link fence surrounds most of the facility, limiting access to the public, and the plant has a 24-hour guard who makes periodic rounds of the plant. Sensitive environments in the area include a wetland about 0.2 mile northeast of the facility.

Because of the moderate probability that releases to the on-site soils at SWMU 2 and AOC 1 have occurred in the past, PRC recommends soil sampling in the two areas to determine whether hazardous constituents were released. Soil samples should be collected at SWMU 1 and analyzed for volatile and semivolatile organics, and metals. Soil samples also should be collected at AOC 1 and analyzed for thiodiglycol, which is a degradation product of mustard gas.

## 1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC) received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of setting priorities among facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has dripped continually onto soils.

An AOC is defined as any area from which a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and

nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all visible SWMUs, identifying evidence of releases, initially identifying potential sampling parameters and locations, if needed, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Ohio Rubber Company (Ohio Rubber) facility in Willoughby, Ohio. The PA was completed on January 31, 1992. PRC gathered and reviewed information from the Ohio Environmental Protection Agency (OEPA) central and regional offices, and from EPA Region 5 RCRA files. The VSI was conducted on February 11,



1992. It included interviews with Ohio Rubber facility representatives and a walk-through inspection of the facility. Seven SWMUs and one AOCs were identified at the facility.

PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included as Attachment A. The VSI is summarized and 22 inspection photographs are included in Attachment B. Field notes from the VSI are included as Attachment C.

## **2.0 FACILITY DESCRIPTION**

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors.

### **2.1 FACILITY LOCATION**

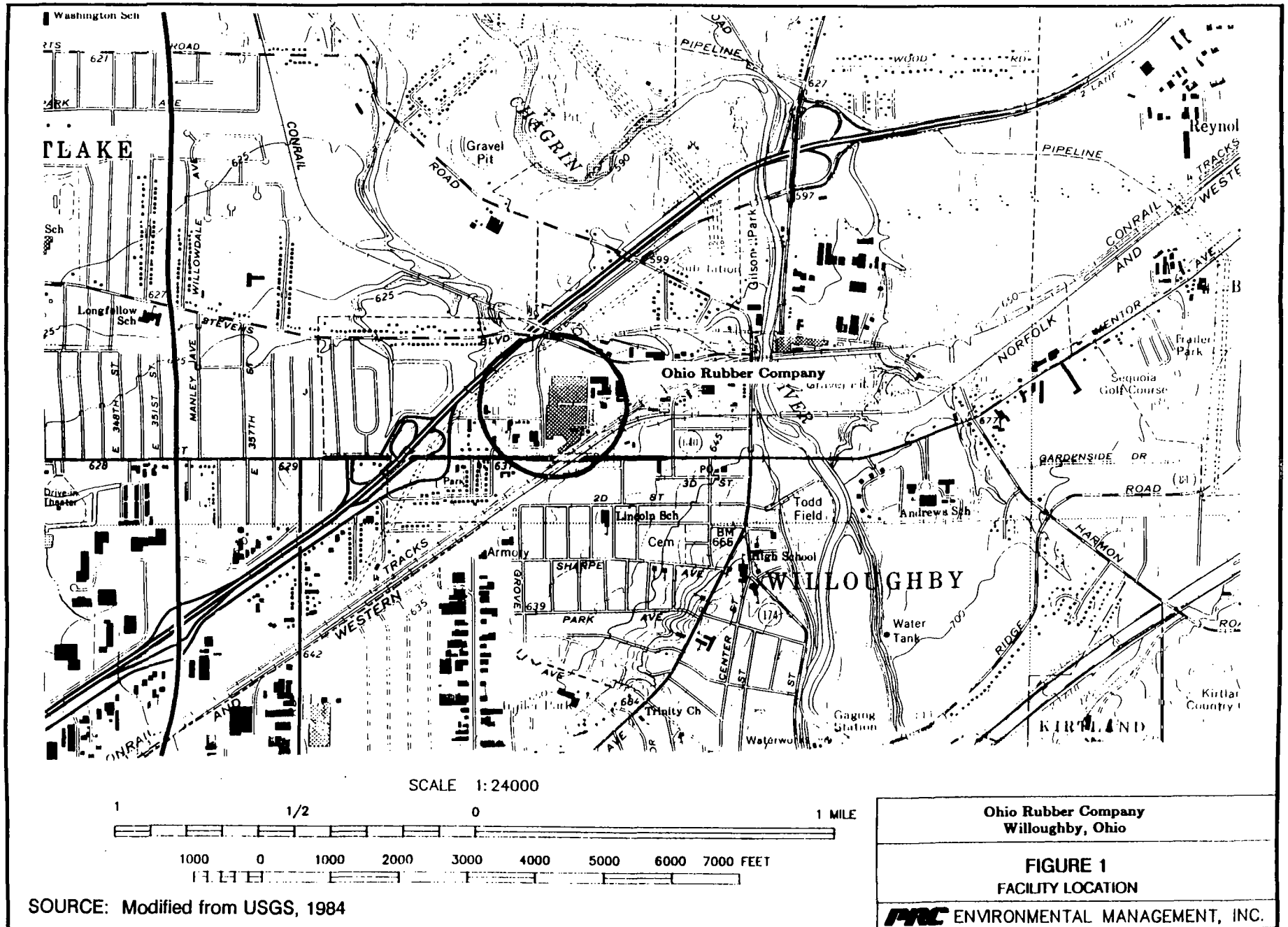
The Ohio Rubber facility is located at 3911 Ben Hur Avenue in Willoughby, Lake County, Ohio (latitude 41°38'30" N and longitude 81°25'00" W), as shown in Figure 1. The facility occupies 57 acres in an industrial area.

The Ohio Rubber facility is bordered on the north by Stevens Boulevard, on the west by Ben Hur Avenue, and on the south and east by Conrail railroad tracks. There is access to the facility from Ben Hur Avenue either through Building A or C or through a secured gate. The facility is surrounded by a chain-link fence. An extension of the Conrail railroad track runs between Buildings B and C. The track extension is no longer used and there is a locked gate across the tracks.

### **2.2 FACILITY OPERATIONS**

Ohio Rubber, a division of Eagle Picher Industries, manufactured rubber automotive accessories, mostly rubber floor mats, at the Ben Hur Avenue facility. The facility ceased operations on October 18, 1991. Since that time, two boilers have continued operating to heat the facility.

The facility has operated at its current location since the early 1900s, when the plant was founded. The manufacturing operations reached their peak in the early 1980s, when the plant employed approximately 750 people. During the 1950s, the facility housed a tenant operation involving peroxide manufacture, however, no documentation on this operation has been found. According to facility representatives, during World War I, the facility was designated a preproduction facility for mustard gas; however, the gas production never went into operation at the facility (PRC, 1992).



The plant consists of three manufacturing buildings and approximately five smaller storage or processing buildings. Facility SWMUs are identified in Table 1. Figure 2 shows the facility layout, including SWMUs. Buildings designated A and B in Figure 2 were the original buildings at the plant; other buildings were added, expanded, or removed through the years. Buildings Q3, Q2, J, and K have been torn down.

Throughout the operating life of the facility, the rubber manufacturing process at Ohio Rubber remained the same. Raw rubber or reclaimed rubber was stored on site. The raw material was mixed with plasticizers in high-intensity banbury mixers. The mixture was sent through the milling and rolling process, then either to presses or injection molders. The product then was trimmed and finished. The trimmings were reclaimed in the rubber reclamation process. The mats were painted or backing or metal parts were glued to them. The spray booths that applied the paint or adhesive used latex paint and solvent-based adhesives. The wash water from the spray booths was discharged directly to the city sewer system. The paint sludge from the spray booths was placed in drums and stored on-site, initially in the satellite accumulation area (SWMU 6). Before 1986, the drums then were moved to the old drum storage area (SWMU 2); and after 1986, they were moved to the new drum storage area (SWMU 3).

Ohio Rubber operated a prosmatic unit, a chemical conversion coating process unit, that used phosphoric acid, chromic acid, and detergents. The acid wastes from the prosmatic unit were placed in drums and first stored in the satellite accumulation areas (SWMU 6), then moved either to the old drum storage area (SWMU 2), before 1986, or to the new drum storage area (SWMU 3), after 1986.

Ohio Rubber operated a vapor degreaser that used either methylene chloride or 1,1,1-trichlorethylene. The spent halogenated solvent wastes generated by the periodic cleaning of the unit were placed in drums and stored either in the old drum storage area (SWMU 2), before 1986 or in the new drum storage area (SWMU 3), after 1986.

Ohio Rubber began operating a rubber reclamation process in the mid- to late 1960s. Using raw materials, including shredded tires from an off-site source, scrap trimmings, and reclaim oils, the reclaim plant produced rubber pellets that were transferred to storage and later used in the production process. In the reclaim process, tire buffings (high-grade stock) and mat trimmings (low-grade stock) were sized and conveyed to a cracking unit. After cracking was done, appropriate amounts of reclaim oil consisting of a mixture of tall oil pitch and aromatic

**Table 1**

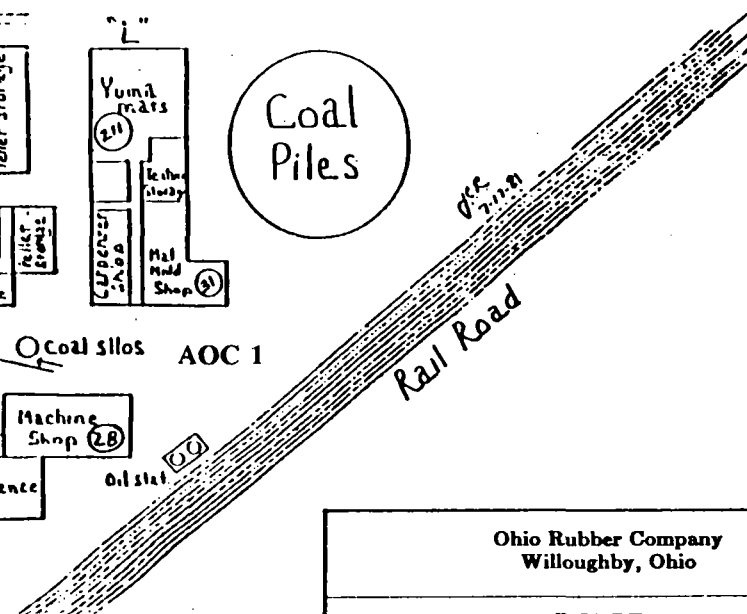
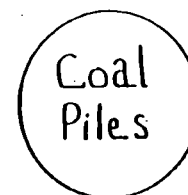
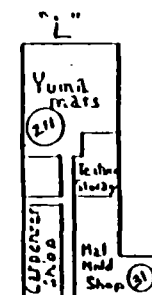
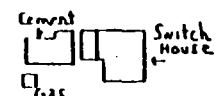
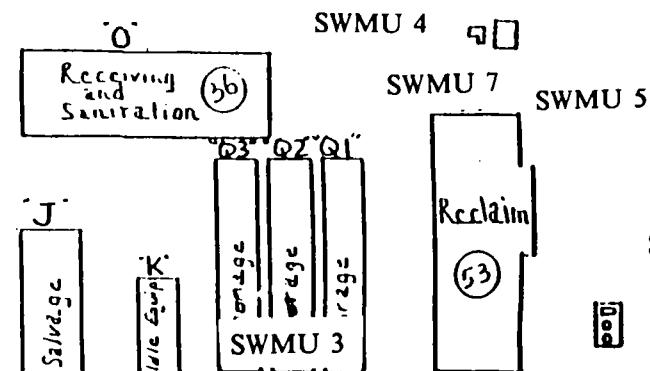
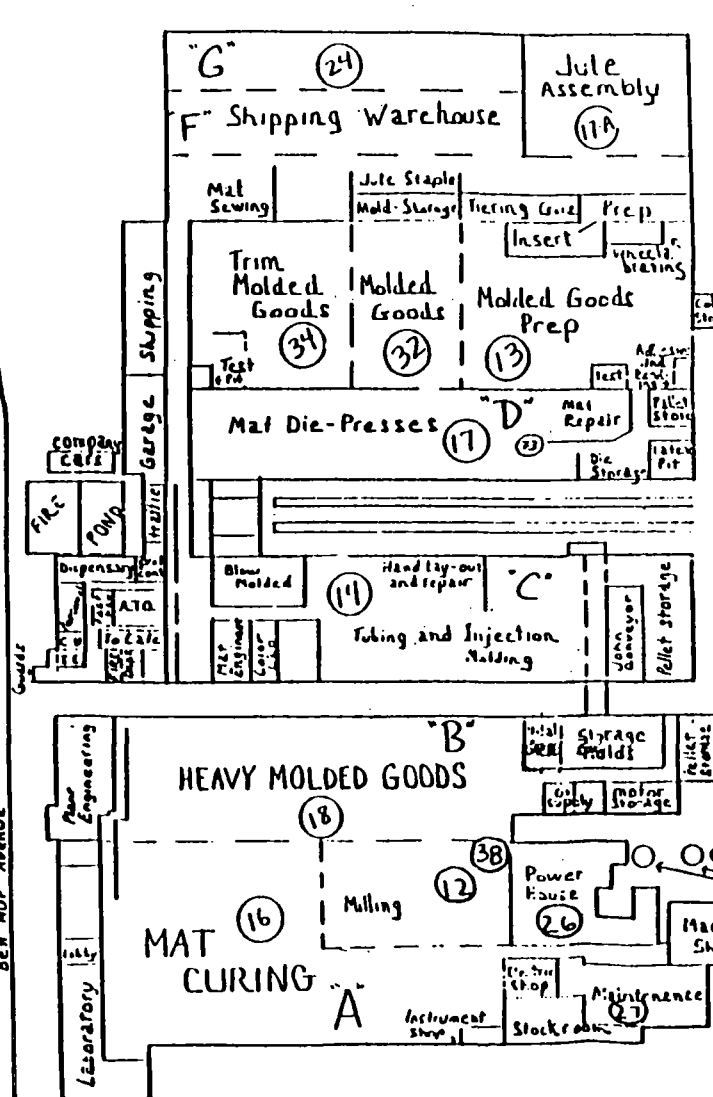
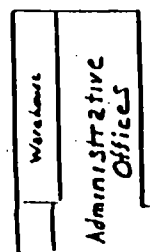
**Solid Waste Management Units (SWMU)**

| <b>SWMU<br/>Number</b> | <b>SWMU Name</b>               | <b>RCRA Hazardous<br/>Waste Management<br/>Unit*</b> | <b>Status</b> |
|------------------------|--------------------------------|------------------------------------------------------|---------------|
| 1                      | Surface Impoundment            | No                                                   | Inactive      |
| 2                      | Old Drum Storage Area          | Yes                                                  | Inactive      |
| 3                      | New Drum Storage Area          | No                                                   | Inactive      |
| 4                      | Underground Waste Storage Tank | Yes                                                  | Inactive      |
| 5                      | Tank Farm                      | Yes                                                  | Inactive      |
| 6                      | Satellite Accumulation Areas   | No                                                   | Inactive      |
| 7                      | Wastewater Treatment Plant     | No                                                   | Inactive      |

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Note:

- \* A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B application.
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**FIGURE 2**  
**FACILITY LAYOUT**

**PRC** ENVIRONMENTAL MANAGEMENT, INC.

**SOURCE:** Modified from Ohio Rubber Company Site Plan

NOT TO SCALE

naphtha solvent were added to the two stocks. The mixtures then were placed in heater cars and sent to an autoclave devulcanizer. During devulcanizing, the rubber-oil mixture was steam-heated and pressurized. The reclaimed rubber then was tilled and reduced in a cake breaker. The two stocks then were mixed with proportional amounts of resin, clay, and limestone, and the mixture was conveyed first to a blender and then to a plasticator that blended, fused, and homogenized the rubberlike mixture. The mixture then passed through rollers and strainers to remove lumps or nonrubberlike material. The product then moved to sheeter mills that rolled it into thin sheets. The sheets were processed through the pelletizer, where clay was added to form cylindrical pellets. The hot pellets were cooled and transported to storage. Between 1974 and 1977, the blowdown from the reclaim process was discharged through pipes to a surface impoundment (SWMU 1). In 1977 the facility stopped using SWMU 1, which was filled in with dirt fill material in 1980 (Ohio Rubber, 1981). After 1977, the facility modified the blowdown operation and added a condenser. The blowdown steam, vapors, and entrained particles from the autoclaves vented to a condenser and chiller. The condensed water was treated in a biological wastewater treatment plant (SWMU 7). The biological wastewater treatment plant had two stages. The first stage provided for extended aeration; the second stage was a clarification tank and an aerobic digester. In the second stage, the sludge settled into withdrawal hoppers, while the supernatant overflowed a weir into the city sanitary sewer (Ohio Rubber, 1986). The sludge from the wastewater treatment plant was placed in drums and stored in the old drum storage area (SWMU 2) or, after 1986, the new drum storage area (SWMU 3) to await off-site disposal. For odor control, the noncondensable gases from the blowdown process were vented to an incinerator unit fired by natural gas (PRC, 1992).

The condenser also generated a floating solvent/water sludge that, before 1984, was skimmed off the water and stored in the underground waste storage tank (SWMU 4). Later, the sludge was stored in the tank farm (SWMU 5). This solvent/water sludge was taken off site to Chemical Associates for recycling. Chemical Associates separated the solvent (a highly aromatic naphtha) from the water and solids. The water and solids were placed in drums and returned to Ohio Rubber, where they were stored in the old drum storage area (SWMU 3), or, after 1986, in the new drum storage area (SWMU 3) to await off-site disposal by Chemical Waste Management. Chemical Associates used the solvent to generate their product, a reclaim oil that Ohio Rubber used as raw material in its rubber reclamation process (OEPA, 1985a).

The underground waste storage tank (SWMU 4) was emptied in 1984 and filled with sand. It was replaced by three aboveground tanks (SWMU 5). Before September 1984, Ohio Rubber had

the tank leak tested and found that it did not leak (Ohio Rubber 1984b). At that time Ohio Rubber indicated its intent to pump out the tank and fill it with sand. An inspection form completed by OEPA on April 16, 1985 contained remarks documenting that the underground waste storage tank had been emptied and filled with sand and that, at the time of the inspection, the solvent/water sludge was stored in 3 aboveground tanks (OEPA, 1985b). No other documentation pertaining to the closure of the underground tank was found.

### 2.3 WASTE GENERATING PROCESSES

The primary waste streams generated at the Ohio Rubber facility were spent halogenated solvents, spent acid waste, paint wash water, latex- and solvent-based paint sludge, solvent/water sludge, and water/solid wastewater. These wastes were generated during the production of rubber mats for the automotive industry. Waste sources were identified during the regional OEPA office file review (OEPA, 1985a). Wastes generated at the facility are discussed below and are summarized in Table 2. Annual generation rates presented are based on 1982 waste generation data, when available (Ohio Rubber, 1983).

The metal degreasing process consisted of a vapor degreaser which used either methylene chloride, 1,1,1-trichloroethylene, or perchloroethylene to clean surfaces on various metal mat attachments. This process generated spent halogenated solvents (EPA waste code F001). This waste was accumulated in drums in SWMU 6, the satellite accumulation area, then transferred to SWMU 2, the old drum storage area, or to SWMU 3, the new drum storage area. About 7,400 pounds of spent halogenated solvents were generated annually. This waste was transported off site to a recycling facility, McKesson EnviroSystems in Kentucky, by Chemical Solvents, Inc.

The chromate or phosphate conversion coating process of the prosmatic unit used chromic or phosphoric acid. This process generated spent acid waste (D002). This waste was accumulated in drums in SWMU 6, the satellite accumulation area, then transferred to SWMU 2, the old drum storage area, or SWMU 3, the new drum storage area. About 10,210 pounds of spent acid waste was generated annually. This waste was transported off site to a recycling facility by Chem-Clear of Cleveland.

Part of the mat finishing process consisted of spray-booth application of latex- and water-based paints or solvent-based adhesives to the mats. This process generated paint wash water and latex- and solvent-based paint sludge (F005). The washwater from the paint lines was a



**Table 2**  
**Solid Wastes**

| <b>Waste/EPA Waste Code</b>                | <b>Source</b>                             | <b>Primary Management Unit</b> |
|--------------------------------------------|-------------------------------------------|--------------------------------|
| Spent halogenated solvents/F001            | Degreasing operation                      | SWMU 2, 3, 6                   |
| Spent acid waste/D002                      | Prosmatic operation                       | SWMU 2, 3, 6                   |
| Paint waste water/NA**                     | Spray booths                              | Flowed directly to City Sewer  |
| Latex- and solvent-based paint sludge/F005 | Spray booths                              | SWMU 2, 3, 6                   |
| Condensate waste water/NA**                | Autoclave blowdown condenser              | SWMU 1, 7                      |
| Waste water sludge/F005                    | Wastewater treatment plant                | SWMU 1, 2, 3, 6, 7             |
| Solvent/water sludge/F005                  | Autoclave blowdown                        | SWMU 1, 4, 5                   |
| Water/solid waste/D001                     | Generated off site by Chemical Associates | SWMU 1, 2, 3                   |

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Notes:

\* Primary management unit refers to a SWMU that currently manages or formerly managed the waste.

\*\* Nonapplicable (NA) designates nonhazardous waste.

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nonhazardous waste and was released directly to the city sewer. The paint sludge waste was accumulated in SWMU 6, the satellite accumulation area, then transferred to SWMU 2, the old drum storage area, or SWMU 3, the new drum storage area. The quantity of this waste generated annually was not reported in Ohio Rubber's 1982 Generator Annual Hazardous Waste Report. This waste was transported off site to a disposal facility. The waste handler was not identified.

The rubber reclamation process included the use of steam-heated, high-pressure autoclaves. The vapor from the blowdown of the autoclaves was condensed to produce wastewater, wastewater sludge, solvent/water sludge (considered a by-product under RCRA after 1985), and water/solid waste. Between 1974 and 1977 the condensate was vented via piping to SWMU 1, the surface impoundment, where it was left to evaporate.

After 1977 the wastewater from the condensation of the autoclave blowdown was treated in SWMU 7, the wastewater treatment plant. The amount of wastewater treated is not documented. The treated wastewater was then released to the city sewer system.

The wastewater sludge generated by SWMU 7, the wastewater treatment plant, was placed in drums and accumulated in SWMU 2, the old drum storage area, or SWMU 3, the new drum storage area. The quantity of this waste the facility generated was not documented. The waste, placed in drums, was transported off site to a disposal facility. The waste handler was not identified.

After 1977 the solvent/water sludge was accumulated in SWMU 4, the underground waste storage tank, and later in SWMU 5, the tank farm. The amount of sludge generated at the facility was not documented. The sludge was taken off site for reclamation by Chemical Associates. The separated water/solid waste was returned to Ohio Rubber. The remaining solvent was recycled by Chemical Associates into reclaim oil.

The water/solid waste generated by Chemical Associates' reclamation of the solvent/water sludge was returned to Ohio Rubber for disposal. The water/solid waste was placed in drums and accumulated in SWMU 2, the old drum storage area, or SWMU 3, the new drum storage area. The quantity of this waste the facility accumulated was not documented. The waste, placed in drums, was transported off site for disposal by Chemical Waste Management.

## 2.4

### HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to ground water, surface water, air, and on-site soils at the Ohio Rubber facility.

There have been no documented releases of hazardous wastes or hazardous constituents to ground water or surface water. Releases to on-site soils might have occurred. A notification of hazardous waste site form completed by the facility indicated the possibility that canisters of mustard gas were buried at the site (AOC 1) during World War I (Ohio Rubber, 1981b). In the 1950s, during construction at the facility, some glass containers were uncovered. The Army removed them but did not inform facility representatives of their contents. Ohio Rubber completed a ground-penetrating radar (GPR) survey in the area but was unable to detect the presence of any containers (PRC, 1992). Several complaints from area residents indicate that releases to air from the facility have occurred. In May 1982, a perchloroethylene spill (quantity unknown) occurred when a tank valve malfunctioned (location unknown). According to OEPA notes, the spill was contained within the tank dike (OEPA, 1983). On October 1, 1988, the blowdown motor on the afterburner-incinerator malfunctioned, causing the odor level at the plant to be higher than normal (OEPA, 1988). During the latter part of July and August 1990, complaints about odor were received, and the odor was traced to the reclaim oil from a rubber digester and autoclave used in the blowdown portion of the rubber reclaiming process (OEPA, 1990a, 1990b). Ohio Rubber informed OEPA during a subsequent meeting on August 16, 1990 of its intention to replace its reclaim oil with a much less odorous one (OEPA, 1990c). On March 21, 1991, an odor complaint was received by OEPA. No further documentation pertaining to that complaint was found.

## 2.5

### REGULATORY HISTORY

Ohio Rubber submitted a notification of hazardous waste activity to EPA on May 5, 1981 (Ohio Rubber, 1981a). The facility submitted a RCRA Part A permit application on November 16, 1980 (Ohio Rubber, 1980). This application identified storage in containers (up to 50,000 gallons) and storage in tanks (up to 35,000 gallons). The application listed the following wastes: spent halogenated solvents (F001); spent nonhalogenated solvents (F005); asbestos (U013); acetone (U002); methyl ethyl ketone (U159); toluene (U220), 1,1,1-trichloroethane (U226); phenol (U188); 4-methyl-2-pentanone (U161); lead (D008); and chromium (D007). On December 15, 1981, the Ohio Hazardous Waste Facility Approval Board (HWFAB) issued to Ohio Rubber Hazardous Waste

Facility Installation and Operation Permit No. 02-43-0301. The permit included an amended Part A permit application from which wastes D008 and D007 had been removed (HWFAB, 1981). In May 1982, Ohio Rubber submitted amendments to its Part A permit application to remove tank storage (S02) capacity from the permit and to reduce its storage container capacity (Ohio Rubber, 1982); OEPA approved the proposed modifications (OEPA, 1982). In August 1984, OEPA notified Ohio Rubber that its permit No. 02-43-0301 would expire on September 15, 1984 (OEPA, 1984b). On September 11, 1984, Ohio Rubber submitted an application for renewal of its hazardous waste installation and operation permit (Ohio Rubber, 1984a). On June 26, 1985, Ohio Rubber requested withdrawal of its hazardous waste transporter and storage permit (Ohio Rubber, 1985a) and requested generator-only status, with less-than-90-day storage permitted. In its letter, Ohio Rubber maintained that since 1980 all hazardous waste it stored had been on the site for fewer than 90 days, that Ohio Rubber therefore had never been a storage facility, and that the withdrawal request was not a result of any change in operations. The facility claimed that since it was canceling an "unused interim status," it did not believe that closure or a closure plan was necessary. Receiving no response, Ohio Rubber again requested withdrawal of the permit on November 5, 1985, indicating that it hoped for an "informal 'paper closure'" (Ohio Rubber, 1985b). OEPA files contained a closure plan for Ohio Rubber dated June 25, 1986, with no accompanying documentation (Ohio Rubber, 1986a). On August 13, 1986, EPA stated in a letter to Ohio Rubber that EPA information indicated that, at some point since November 19, 1980, the facility stored hazardous wastes for more than 90 days. Thus, EPA considered the facility subject to the closure requirements (EPA, 1986a). An October 30, 1986 note to file in OEPA files stated that the facility could not verify protective filer status but that the facility was in compliance with generator status. OEPA indicated the facility then could "quick close" on the less-than-90-day storage basis rather than on the protective filer basis (OEPA, 1986c). On November 17, 1986, OEPA withdrew Ohio Rubber's Ohio waste installation and operation permit and granted Ohio Rubber the status of generator only with less-than-90-day storage (OEPA, 1986d). On December 9, 1986, EPA approved Ohio Rubber's request for a change in status to generator only with less-than-90-day storage (EPA, 1986b).

Ohio Rubber submitted a notification of hazardous waste site form to EPA on May 29, 1981 (Ohio Rubber, 1981b). The form identified the surface impoundment (SWMU 1) and the burial of World War I chemical warfare materials (AOC 1) as two hazardous waste sites. OEPA completed a preliminary assessment (PA) of the facility based on the hazardous waste site notification form (OEPA, 1984c). The PA recommended the site as a low priority for investigation.

EPA completed a draft screening site inspection (SSI) work plan based on the PA for the Ohio Rubber facility on February 9, 1990. The facility's HRS 1 scores were below 25.00 and a recommendation to designate the facility as a No Further Response Action Planned (NFRAP) facility was made by EPA (EPA, 1990). On August 7, 1991, Eagle Picher notified OEPA that the Ohio Rubber facility would be ceasing all operations about November 30, 1991, with the exception of the boilers that would continue to operate for heating only (Eagle Picher, 1991). An inspection conducted by OEPA in December 1991 revealed that all operations had ceased, with the exception of two boilers and a 6,000-gallon aboveground storage tank containing 5,000 gallons of reclaim oil that the facility was trying to sell (OEPA, 1991).

RCRA compliance inspections conducted by OEPA between 1981 and 1991 identified violations related to unsigned manifests, lack of on-site emergency coordinators, improper storage of ignitable wastes, and missing documents such as a waste analysis plan, a detailed chemical and physical analysis of past waste, an inspection schedule and report forms, the written operating record, the closure plan, the closure cost estimate, and financial assurance documents (OEPA, 1983b). Also missing were the operating record of tank and drum storage and weekly containment and the construction inspection record (OEPA, 1984a). Other violations noted included unpermitted drum storage, inadequate personnel training documents, lack of an updated closure cost estimate (OEPA, 1985c), inadequate contingency plan and job descriptions (OEPA, 1986a), and inadequate labeling of storage tanks (OEPA, 1986e). OEPA acknowledged that Ohio Rubber corrected the violations (OEPA, 1983c, 1984d, 1985b, 1986b, and 1987a).

The Ohio Rubber facility was required to have operating air permits. During its years of operations, the facility was permitted by OEPA for the following units: six metal parts coating booths, six spray booths, two drying ovens, two banbury mixers, four xylene bottom tanks, four degreasers, two boilers, and two or more autoclaves (OEPA, 1987b). Area residents have complained several times about odors emanating from the facility. Complaints were received on January 30, 1985; February 1, 1985; July 1, 1985; October 3, 1988; July 27, 1990; August 2, 1990; and March 21, 1991. (Lake County, 1985a, 1985b, 1985c, 1988, 1991, and OEPA, 1990a, 1990b). The complaints were investigated by OEPA and the facility took action to mitigate the possibility of recurrence. The odors were attributed to the reclaim oil used in the rubber reclaim process. Eventually the reclaim oil was changed to one containing a lower concentration of aromatics, a move that reduced the odor level.

The Ohio Rubber facility is not required to have a National Pollutant Discharge Elimination System (NPDES) permit. Storm water runoff from the facility discharges into the municipal storm sewer. Wastewater from the boilers is processed through the wastewater treatment plant (WTP) and discharged to the city of Willoughby sewer system. Occasional chemical oxygen demand (COD) excesses from the WTP arising from efficiency problems and occasional pH problems from the boiler blowoff have occurred (PRC, 1992).

## **2.6 ENVIRONMENTAL SETTING**

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Ohio Rubber facility.

### **2.6.1 Climate**

Average temperatures in Cleveland range from a low of 26 degrees (°) Fahrenheit (F) in January to a high of 72°F in July. In summer, northern areas nearest Lake Erie are markedly cooler than the rest of the area. Precipitation is well distributed during the year. Average annual precipitation is 35.4 inches, and the intensity of a 1-year, 24-hour rainfall is 2 inches. Average annual net precipitation is approximately 5.4 inches. From late fall through winter, snow squalls are frequent and total snowfall is normally heavy. Of the total annual precipitation, 60 percent usually falls between April and September. Average relative humidity in mid-afternoon is 60 percent, and the average humidity at dawn is 80 percent. The humidity is higher at night than during the daylight hours. The percentage of sunshine is 70 percent in summer and 30 percent in winter. The prevailing wind direction is from the south. Average wind speed is highest, 13 miles per hour, in January (National Oceanic and Atmospheric Administration, 1990).

### **2.6.2 Flood Plain and Surface Water**

The Ohio Rubber facility is not located in a 100-year flood plain area (U.S. Geological Survey, 1974). The nearest surface-water body, an unnamed creek, is located about 1,000 feet north of the facility. The creek flows northeast, through a wetland and into the Chagrin River 0.2 miles from the site (U.S. Department of Interior, 1977). The Chagrin River ultimately flows into Lake Erie. The Chagrin River is used for industrial and municipal water supplies. Surface waters at the site drain to the city sewer system which leads to the municipal wastewater treatment plant.

### 2.6.3

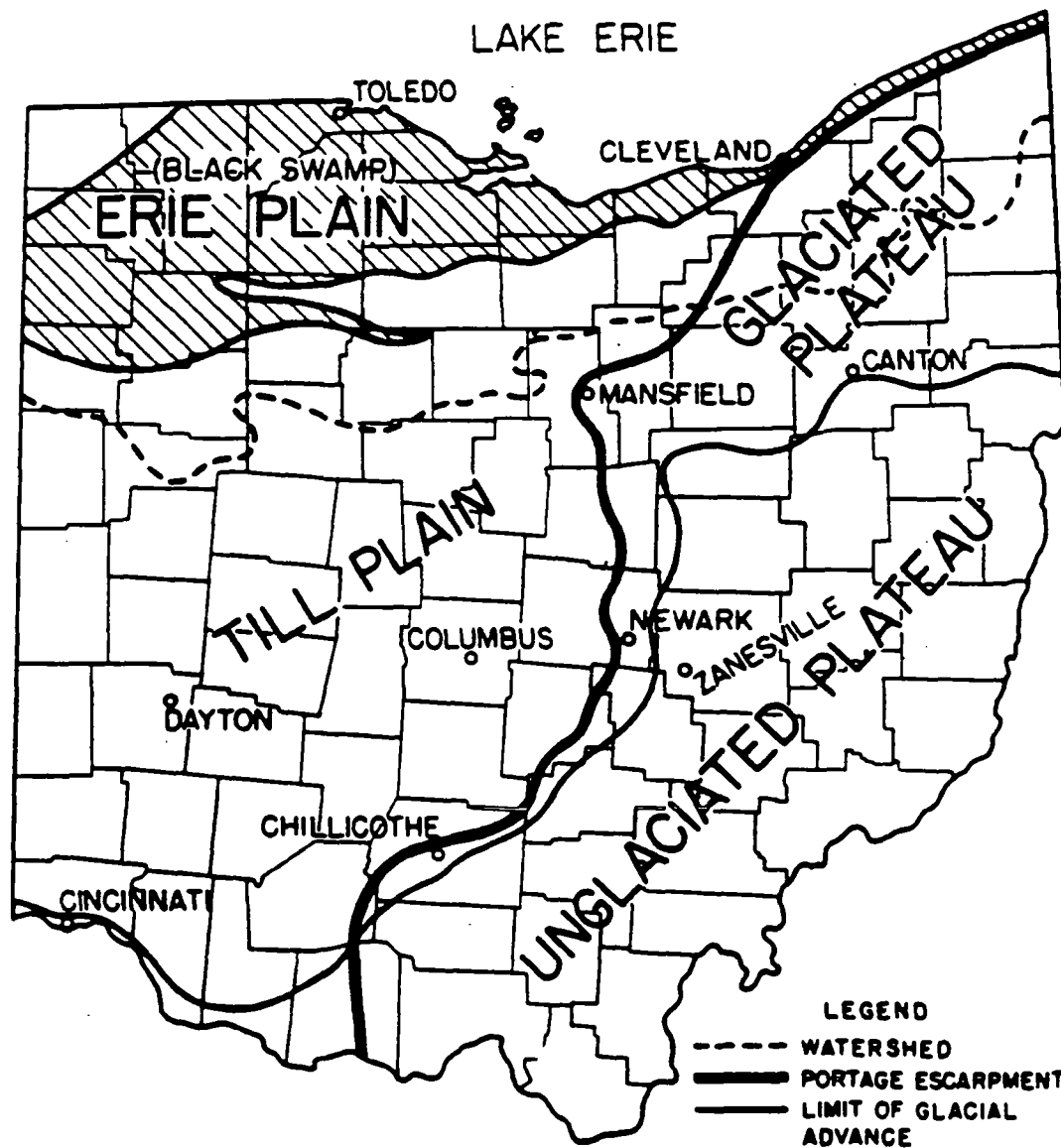
### Geology and Soils

Site-specific geologic information was not available; therefore, regional information is presented. The exposed rocks of the area are of sedimentary origin and range in age from Late Devonian to Pleistocene. They fall into two general classes: indurated stratified rocks of Late Devonian and early Carboniferous age, and unconsolidated surficial deposits of Pleistocene age. The surficial deposits consist mainly of Pleistocene glacial and lacustrine deposits and Recent alluvium. These Pleistocene deposits form a blanket that ranges in thickness from 0 to 440 feet. The indurated rocks underlie the Pleistocene deposits and crop out in the beds and gorges of streams, quarries, and other excavations. The total thickness of Paleozoic strata exposed in this area is about 750 feet. These beds consist of shale, sandstone, and conglomerate of Late Devonian, Early Mississippian, and Early Pennsylvanian age (Cushing, et al, 1931).

Figure 3 illustrates the physiographic boundary lines in Ohio. Figure 4 illustrates the geologic features of the Cleveland area. As these figures illustrate, thicknesses of weak shale mark the surface of the Appalachian Plateau (depicted as "Plateau" on Figure 4) and the two lesser platforms (depicted as "Till Plain" and "Lake Plain" on Figure 4) on the slope of the Portage Escarpment. The uppermost formation is the Sharon conglomerate, of Lower Pennsylvanian age. It is the youngest exposed Paleozoic rock in this area and is the capstone formation of the plateau across northeastern Ohio. Below the Sharon conglomerate, other formations include: the Orangeville and Meadville shales from the Mississippian age; the Cleveland and Bedford shales, classed by some as Upper Devonian and by others as Lower Mississippian age; and the Chagrin shale of Late Upper Devonian age. Figure 5 also shows these rocks as they occur under Cleveland (Cushing, et al, 1931).

Exposed rocks are underlain by large thicknesses of Devonian, Silurian, and Ordovician formations, and presumably by Cambrian formations, resting on a floor of Precambrian crystalline rocks. Figure 5 also shows the approximate thickness of each formation found in the Cleveland area (Cushing, et al, 1931).

The soils of the area around the facility are not readily discernible because of artificial obstacles. The soil association of this area is called Urban land. These are nearly level to gently sloping areas predominantly covered by buildings, structures, concrete, asphalt, and other impervious surfaces. Urban land soils occur mainly in downtown business districts and in corridors along main roads and streets. This soil association makes up about 5 percent of the

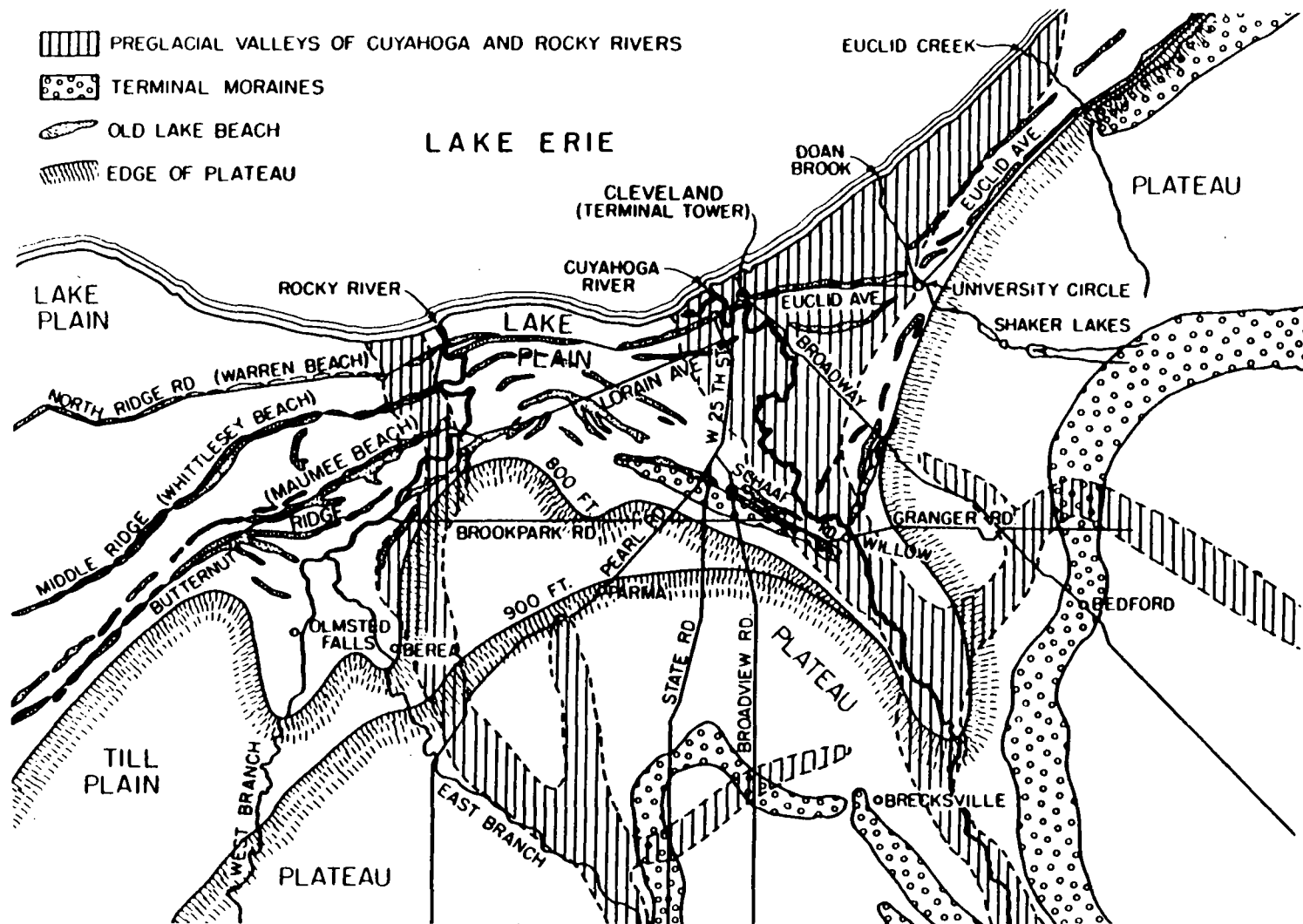


SCALE NOT AVAILABLE

SOURCE: Modified from Williams, 1940

|                                                  |
|--------------------------------------------------|
| Ohio Rubber Company<br>Willoughby, Ohio          |
| FIGURE 3<br>PHYSIOGRAPHIC BOUNDARY LINES IN OHIO |
| <b>MHC</b> ENVIRONMENTAL MANAGEMENT, INC.        |





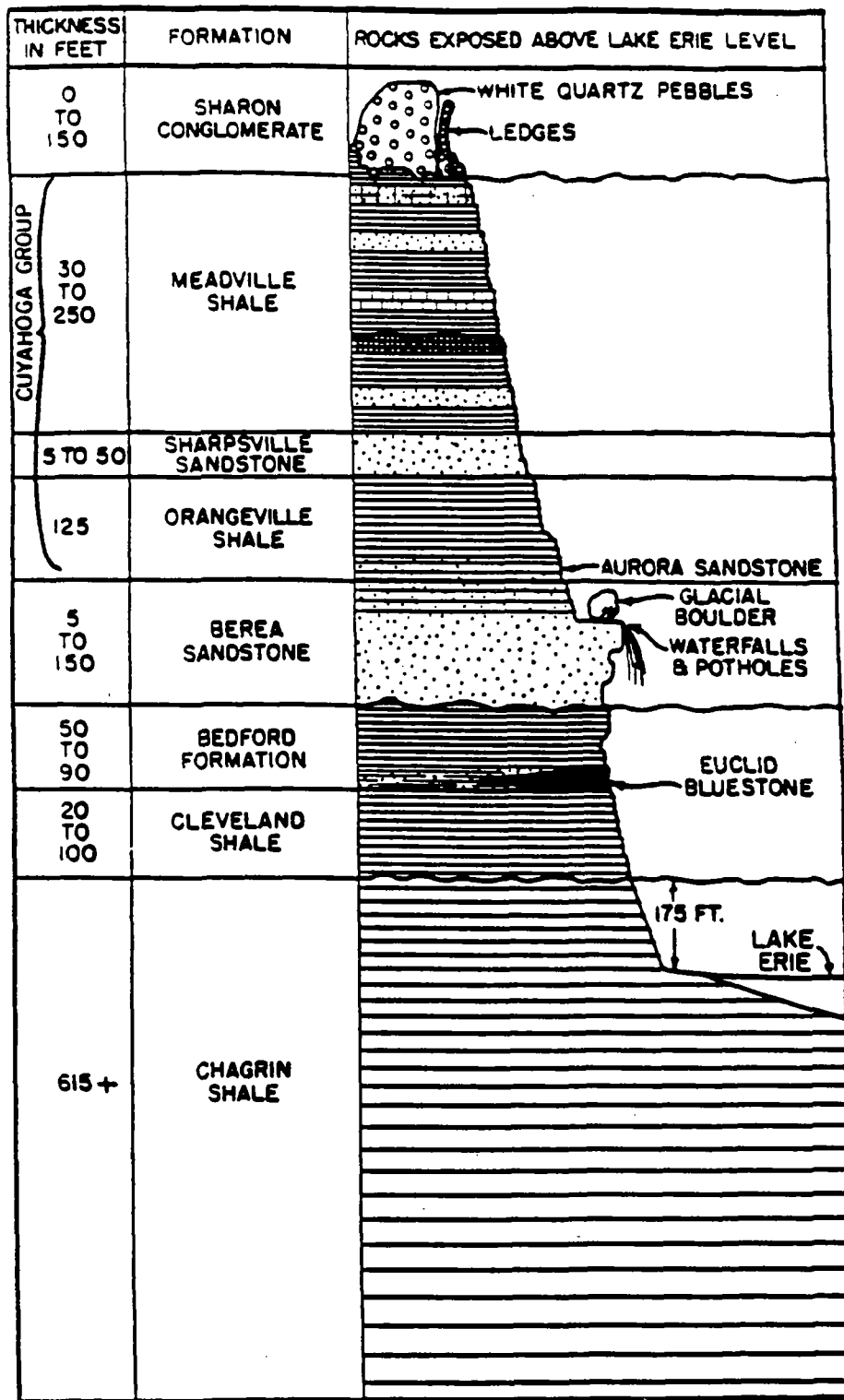
SCALE NOT AVAILABLE

SOURCE: Modified from Williams, 1940

Ohio Rubber Company  
Willoughby, Ohio

FIGURE 4  
GEOLOGICAL FEATURES OF THE  
CLEVELAND AREA

**PMC** ENVIRONMENTAL MANAGEMENT, INC.



Ohio Rubber Company  
Willoughby, Ohio

FIGURE 5  
REPRESENTATIVE GEOLOGIC CROSS-SECTION  
OF THE CLEVELAND AREA

**PMC** ENVIRONMENTAL MANAGEMENT, INC.

SOURCE: Modified from Williams, 1940

county. Such soils are about 80 percent urban land and 20 percent soils of minor extent. Minor soils in these areas consist of Mahoning, Mitiwanga, Elnora, Oshtemo, and Allis soils. Some areas contain such miscellaneous materials as dredgings and industrial wastes (U.S. Soil Conservation Service, 1981). Facility representatives stated that the clay soils beneath the site were covered by fly ash and bottom ash (PRC, 1992).

#### **2.6.4 Ground Water**

Specific information about the ground water beneath the site was not available. A general description of ground water for the area surrounding the site follows. In the glacial drift, there are many alternations of sand and gravel with clay that are capable of storing large quantities of water. The contact of the glacial drift with the underlying Bedford, Orangeville, and Meadville shales is also a source of water, especially where the drift is thick and consists largely of sand and gravel. There are also water-bearing sandstone strata within the Cleveland, Chagrin, and underlying shales of Portage age (Cushing, et al, 1931). The immediate area around the facility, however, is underlain largely by Bedford, Cleveland, and Chagrin shales that contain very little or no potable water (Schmidt, 1954).

The topographic relief gradient indicates the ground-water flow would be southeast to northwest. The ground-water flow rate has not been determined; however, it is expected to be very slow, because of the soil and features identified at or near the facility. The depth to the water table in the Lake Plain area averages approximately 4 to 7 feet below the surface and usually is observed at the contact between unconsolidated sediments and bedrocks (ES, 1990).

#### **2.7 RECEPTORS**

The facility occupies 57 acres in a mixed industrial and residential area in Willoughby, Ohio, a suburb of Cleveland. Willoughby has a population of approximately 20,000.

The Ohio Rubber facility is bordered on the north by Stevens Boulevard, on the west by Ben Hur Avenue, and on the south and east by Conrail railroad tracks. The nearest school, Lincoln School, is located about 0.25 miles southeast of the facility. Access to the facility is controlled by chain-link fencing, a guarded gate, and a security guard who patrols the plant.

The nearest surface-water body, the Chagrin River, is located 0.2 mile northeast of the facility and serves both industrial uses and as a municipal water supply. The Chagrin River municipal water intake is one mile upstream of the site. Other surface-water bodies in the area include an unnamed tributary, located about 1,000 feet northwest of the facility, and a pond, located about 1,000 feet west of the facility. The pond drains northward to the tributary via an intermittent stream. The tributary flows northwest into the Chagrin River. The Chagrin River ultimately flows into Lake Erie. The Lake Erie municipal water intake is two miles from the site. The facility obtains its water supply from the Chagrin municipal water intake.

Ground water is not used as a drinking or industrial water supply. No wells were identified on or near the facility. No sensitive environments are located on the site. A small, intermittently exposed palustrine wetland, 1,000 feet northeast of the site, is the nearest wetland.

### 3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the seven SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC observations.

#### **SWMU 1**

##### **Surface Impoundment**

**Unit Description:**

The surface impoundment is located outdoors in a wooded area east of the plant. The area started as a natural depression into which the blowdown material from the reclamation process was routed for evaporation. The actual location of the unit within the wooded area is unknown, and the entire area is overgrown with small trees and brush. The unit is believed to measure between 50 and 100 feet in diameter. Little information was available concerning the closing of the unit except that the unit was filled in 1977. See photographs 1 and 2.

**Date of Startup:**

The unit began operation in 1974.

**Date of Closure:**

The unit has been inactive since 1977.

**Wastes Managed:**

The unit managed condensate waste water, waste water sludge (F005), solvent/water sludge (F005), and water/solid waste (D001) entrained in the blowdown from the autoclaves. The blowdown was piped from the autoclaves out to the surface impoundment where it was left to evaporate.

**Release Controls:**

The unit had no release controls.

**History of Documented Releases:**

No releases from this SMWU have been documented. The SSI workplan completed in 1990 for the surface impoundment listed the facility's HRS 1 scores as below 25.00 and recommended designating the facility as a NFRAP facility (EPA, 1990). No soil sampling has been conducted at the unit.

**Observations:**

The unit is no longer active. The actual location of the unit within the wooded area is unknown. The unit is separated from the rest of the facility by a security fence, and the entire area is overgrown with small trees and brush; therefore, a close visual examination of the unit was not possible during the VSI.

#### **SWMU 2**

##### **Old Drum Storage Area**

**Unit Description:**

The old drum storage area is located outdoors, on the north side of the plant. The unit was used to store drums of waste and product. Its potential capacity was more than 10,000 drums, although the full capacity never was used. The unit covered approximately 3 acres.

Facility representatives stated that the clay soils beneath the site were covered by fly ash and bottom ash. The unit consisted of drums placed on pallets and on the ground. The area also has been used for the storage of containers of oil and dry material. See photographs 3 through 6.

**Date of Startup:** The unit began operating in the early 1900s.

**Date of Closure:** The unit has been inactive since 1986.

**Wastes Managed:** The unit managed spent halogenated solvents (F001), spent acid waste (D002), latex- and solvent-based paint sludge, wastewater sludge (F005), and water/solids waste (D001). The waste was taken off site for disposal, which was done in part by Chemical Waste Management.

**Release Controls:** The unit had no release controls.

**History of Documented Release:** No releases from the SWMU have been documented.

**Observations:** The unit was inactive at the time of the VSI. No drums were observed. No evidence of release was noted. There was no discernable separation of the unit from the remainder of the facility. There were paved areas surrounded by sparsely vegetated soils. The soils appeared to be fly ash and gravel.

### **SWMU 3                      New Drum Storage Area**

**Unit Description:** The new drum storage area is located outdoors, northeast of the main plant area. The unit measures approximately 30 by 50 feet, and a 5-inch asphalt berm wraps around 3-1/2 sides. The unit has a capacity of approximately 100 drums (see photographs 7 and 8). The base of the unit is made of sloped concrete covered with asphalt; there are no floor drains. The unit stored hazardous wastes in drums before they were sent off site for disposal. During plant operations, any material that collected in the pad was pumped out into drums and disposed of off site.

**Date of Startup:** The unit began operation in 1986.

**Date of Closure:** The unit has been inactive since October 19, 1991.

**Wastes Managed:** The unit managed spent halogenated solvents (F001), spent acid waste (D002), latex- and solvent-based paint sludge, wastewater sludge (F005), and water/solids waste (D001). The waste was taken off site for disposal, which was done in part by Chemical Waste Management.

**Release Controls:** The unit has release controls in the form of a cement floor and a 5-inch-high-asphalt berm on 3-1/2 sides of the pad. The unit is sloped down and away from the unbermed side of the pad. There

are no floor drains or sumps in the unit. Water collects at the lowest edge of the sloped pad.

**History of Documented Release:**

No releases from this SWMU have been documented.

**Observations:**

The unit contained one drum, several pallets, and a dismantled tank. The pad contained collected rainwater. No evidence of a release was noted. The unit appeared to be in good condition and the asphalt covering appeared to be intact with no visible cracks.

**SWMU 4**

**Underground Waste Storage Tank**

**Unit Description:**

The underground waste storage tank is located at the northeastern side of the plant. The unit was used for the storage of the solvent/water sludge byproduct resulting from the rubber reclamation process. The tank capacity is 2,200 gallons. Facility representatives are not sure of the details of the tank's construction; however, it is thought to be a metal tank. Facility files indicate that the contents of the tank were removed in 1984 and it was filled in with sand (OEPA, 1985b). See photograph No. 9.

**Date of Startup:**

The unit began operation in the early 1900s.

**Date of Closure:**

The unit has been inactive since 1984.

**Wastes Managed:**

The unit managed solvent/water sludge (F005). The waste was periodically pumped out of the tank and taken off site for reclamation by Chemical Associates.

**Release Controls:**

It is not known whether there were any release controls for the unit. The tank was leak-tested in 1984 before the contents were removed; the leak test indicated that the tank was sound. (Ohio Rubber, 1984b).

**History of Documented Release:**

No releases from this SWMU have been documented.

**Observations:**

The unit was inactive. Visual observation indicated that the tank possibly was contained within a cement vault. The metal top of the tank was visible, and a raised concrete berm surrounded it. No evidence of release was noted on the surface.

**SWMU 5**

**Tank Farm**

**Unit Description:**

The tank farm is located outdoors, at the northeast corner of the facility. The unit was used to store solvent/water sludge. The tank farm contains three 1,000-gallon tanks and one 2,000-gallon tank. The tanks rest on an approximately 25-foot by 35-foot concrete floor, surrounded by a 3-foot high concrete-block berm (see Photograph No. 10). The unit has no floor drains.

**Date of Startup:** The unit began operation in 1982.

**Date of Closure:** The unit has been inactive since October 18, 1991.

**Wastes Managed:** The unit managed solvent/water sludge (F005). The waste was taken off site for reclamation by Chemical Associates.

**Release Controls:** The unit is located on a concrete pad with a 3-foot-high concrete block berm. There are no floor drains.

**History of Documented Release:** No releases from this SWMU have been documented.

**Observations:** The unit is inactive. The tanks appeared in good condition although there was some rusting. There were no visible cracks in the concrete pad or concrete block wall. The unit contained some frozen rainwater which made thorough observation of the pad difficult. No evidence of release was noted.

#### **SWMU 6**

#### **Satellite Accumulation Areas**

**Unit Description:** The satellite accumulation areas were located in various areas inside the plant. Facility representatives are not sure how many areas existed. These areas consisted of one drum or a small group of drums at each location. The drums were placed either on pallets or on the concrete floor. They stored small amounts of various wastes. When they were full, these drums were closed and transferred to a drum storage area (SWMU 2 or 3) for off-site disposal.

**Date of Startup:** The unit began operation in the early 1900s.

**Date of Closure:** The unit has been inactive since October 18, 1991.

**Wastes Managed:** The unit managed spent halogenated solvents (F001), spent acid waste (D002), latex- and solvent-based paint sludge, and wastewater sludge (F005). The waste was taken to the old or new drum storage areas (SWMU 2 and 3) to await off-site disposal.

**Release Controls:** The unit was located indoors and had secondary containment in the form of concrete floors and walls. The joints between concrete floors and walls appeared to be intact.

**History of Documented Release:** No releases from this SWMU have been documented.

**Observations:** No satellite accumulation areas were observed during the VSI because they had been removed. No major cracks were observed in the floors or the walls of the buildings inspected.



**SWMU 7****Wastewater Treatment Plant****Unit Description:**

The wastewater treatment plant, located outside, consists of five semi-submerged concrete pits with above- and below-ground piping. The unit is a packaged plant with a biologically activated sludge system. The capacity of each pit is estimated to be between 3,000 and 5,000 gallons. What sludge is produced is removed by hand, placed in drums which are stored in SWMU 2 or 3, and disposed of off site. See photographs 11 and 12.

**Date of Startup:**

The year of startup is estimated as 1976.

**Date of Closure:**

The unit has been inactive since October 19, 1991.

**Wastes Managed:**

The unit managed condensate wastewater entrained in the condensed blowdown from the autoclaves. The treated wastewater was released to the city sewer system. The waste water sludge (F005) from the unit was removed, placed in drums and stored in the old or new drum storage areas (SWMUs 2 and 3) to await off-site disposal.

**Release Controls:**

The treatment tanks are contained inside concrete vaults.

**History of Documented Release:**

No releases from this SWMU have been documented.

**Observations:**

The SWMU was inactive at the time of the VSI. The unit was full of water. The tanks appeared to be in good condition; however, because the tanks are below ground, a close visual examination of the unit was not possible. No evidence of release was noted.

#### **4.0 AREAS OF CONCERN**

PRC identified one AOC during the PA/VSI. This AOC is discussed below: its location is shown in Figure 2.

##### **AOC 1**

##### **Chemical Warfare Burial Site**

The area is located east of buildings A and B. The facility was converted temporarily during World War I for the manufacture of mustard gas. According to facility representatives, the facility never went into production. During construction excavation at the facility in the 1950s canisters were unearthed. The Army was contacted and they removed the canisters. Individuals at the facility were not informed of the contents of the canisters. Subsequently, Ohio Rubber completed a ground-penetrating radar (GPR) survey of the area but did not detect any additional canisters (PRC, 1992).

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## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified seven SWMUs at the Ohio Rubber facility. Background information on the facility's location, operations, waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. AOCs are discussed in Section 4.0. Following are PRC's conclusions and recommendations for each SWMU and AOC. Table 3 summarizes information about the SWMUs and AOCs at the Ohio Rubber facility and the recommended further actions.

### SWMU 1

#### Surface Impoundment

##### Conclusions:

The unit managed solvent/water sludge and water/solids waste entrained in the blowdown from the autoclaves. The unit was active from 1974 to 1977. The volume of hazardous waste entrained in the condensate was probably fairly small as the waste water treatment plant (SWMU 7) which subsequently handled the blowdown generated a small amount of sludge which was removed by hand. The unit was never regulated under RCRA because it closed before 1980. The surface impoundment was identified as an abandoned waste site in a CERCLA 103 notification form submitted by the facility in May 1981 (Ohio Rubber, 1981). A PA was completed by OEPA in August 1984; it found that the "site does not appear to be an NPL candidate" and recommended a low priority for further investigation (OEPA, 1984c). In February 1990, EPA completed a draft SSI work plan. The facility's HRS 1 scores were below 25.00 and EPA recommended designating the facility as a NFRAP facility (EPA, 1990). It is located outdoors, northeast of the plant. The unit is completely overgrown with vegetation. No releases from this unit have been documented.

**Surface Water:** Low. The unit is inactive, so no potential currently exists for release of hazardous constituents to environmental media. No surface-water bodies are located within 1,000 feet of the unit. Contaminated runoff would either percolate into soils or drain to the city sewer system.

**Ground water:** Moderate. On-site soils potentially are contaminated, providing a source for ground-water contamination. According to facility representatives, site soils consist of tight, impermeable clays that likely would limit migration into ground water at the site (PRC, 1992).

**Air:** Low to Moderate. The condensate was left to evaporate, so some release of hazardous wastes or hazardous constituents to air might have occurred. The unit is inactive, so no potential currently exists.

**On-site soils:** Moderate. The possibility of past releases to on-site soils is moderate because there is no containment for the unit. The condensate

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Table 3

SWMU and AOC Summary

| SWMU                            | Dates of Operation           | Evidence of Release | Recommended Further Action                                                                                                                                                                      |
|---------------------------------|------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Surface Impoundment          | 1974 to 1977                 | None                | Collect soil samples to determine whether contamination exists; analyze samples for volatile and semivolatile organics, and metals. Any contaminated soils should be excavated and disposed of. |
| 2. Old Drum Storage Area        | Early 1900s to 1986          | None                | Collect soil samples to determine whether contamination exists; analyze samples for volatile and semivolatile organics, and metals. Any contaminated soils should be excavated and disposed of. |
| 3. New Drum Storage Area        | 1986 to October, 1991        | None                | None                                                                                                                                                                                            |
| 4. Underground Storage Tank     | Early 1900s to 1986          | None                | None                                                                                                                                                                                            |
| 5. Tank Farm                    | 1982 to October, 1991        | None                | None                                                                                                                                                                                            |
| 6. Satellite Accumulation Areas | Early 1900s to October, 1991 | None                | None                                                                                                                                                                                            |
| 7. Wastewater Treatment Plant   | 1976 to October, 1991        | None                | None                                                                                                                                                                                            |
| <b>AOC</b>                      |                              |                     |                                                                                                                                                                                                 |
| 1. Chemical Warfare Burial Site | 1914 - 1918                  | None                | Collect soil samples to determine whether contamination exists; analyze samples for thiodiglycol. Any contaminated soils should be excavated and disposed of.                                   |

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from the autoclaves was piped directly to the impoundment to evaporate. The remaining residue was not removed and the unit was filled in 1977.

**Recommendations:** RCRA closure was never performed or required for this unit. No evidence of any past releases has been documented; however, because of the size of the unit and uncertainty about the quantities of hazardous constituents, the possibility of on-site soil contamination should be explored. The exact location of the impoundment should be determined, and soil samples should be taken from representative sections of the area. Samples should be analyzed for volatile and semivolatile organics, and metals. If any contaminated soils are found the area should be excavated and the soil disposed of.

**SWMU 2                      Old Drum Storage Area**

**Conclusions:** The unit managed spent halogenated solvents, spent acid waste latex- and solvent-based paint sludge, wastewater sludge, and water/solids waste. The unit has been inactive since 1986. It is located north of the facility. There is no discernable separation between the unit and the remainder of the facility. No releases from this unit have been documented. The potential for release to environmental media is detailed below.

**Surface Water:** Low. The unit is inactive, so no potential currently exists for release of hazardous constituents to environmental media. No surface-water bodies are located within 1,000 feet of the unit. Spills or contaminated runoff would either percolate into soils or drain to the city sewer system.

**Ground water:** Low to Moderate. On-site soils potentially are contaminated, providing a source for ground-water contamination. According to facility representatives, site soils consist of tight, impermeable clays that likely would limit migration into ground water at the site (PRC, 1992).

**Air:** Low. The waste was stored in sealed 55-gallon drums, a procedure that limited air emissions.

**On-site soils:** Moderate. The possibility of past releases to on-site soils is moderate because there is no containment for the unit. The drums were placed directly on the ground or on pallets on the ground. Any material spilled would have fallen directly on the ground.

**Recommendations:** RCRA closure was never performed or required for this unit. No obvious evidence of any past releases was observed; however, because of the size of the unit and uncertainty about the past management of the drums of waste, the possibility of on-site soil contamination should be explored. Soil samples should be taken from representative sections of the 3-acre area. Samples should be analyzed for volatile and semivolatile organics, and metals. Any contaminated soils found should be excavated and disposed of.

RELEASED

DATE

RIN #

INITIALS

4/6/99

639-99

mw

ENFORCEMENT  
CONFIDENTIAL**SWMU 3****New Drum Storage Area****Conclusions:**

The unit managed spent halogenated solvents, spent acid waste, latex- and solvent-based paint sludge, wastewater sludge, and water/solids waste. The unit has not operated since October 18, 1991. A pad and berm of concrete and asphalt provide secondary containment. The unit has a low potential for release to ground water, surface water, air, and on-site soils. No releases from this unit have been documented.

**Recommendations:**

No action is recommended.

**SWMU 4****Underground Waste Storage Tank****Conclusions:**

The unit managed solvent/water sludge. The unit has been inactive since 1986. The tank has been leak-tested, emptied, and filled in with sand. Visual investigation suggested that the tank was contained within a concrete vault. The unit has a low potential for release to ground water, surface water, air, and on-site soils. No releases from this unit have been documented.

**Recommendations:**

No action is recommended.

**SWMU 5****Tank Farm****Conclusions:**

The unit managed solvent/water sludge. The unit has been inactive since October 18, 1991. The tank farm has secondary containment in the form of a concrete pad and berm. No releases from the unit have been documented. The unit has a low potential for release to ground water, surface water, air, and on-site soils.

**Recommendations:**

No action is recommended.

**SWMU 6****Satellite Accumulation Areas****Conclusions:**

The unit managed spent halogenated solvents, spent acid waste, latex- and solvent-based paint sludge, wastewater sludge, and water/solids waste. The unit has not operated since October 18, 1991. It was located at several sites inside the plant buildings. The concrete floor and walls of the building provided secondary containment. No releases from this unit have been documented. The unit has a low potential for release to ground water, surface water, air, and on-site soils.

**Recommendations:**

No action is recommended.

**SWMU 7****Wastewater Treatment Plant****Conclusions:**

The unit managed condensate wastewater entrained in the blowdown from the autoclaves. The unit has not operated since October 18, 1991. It is located outside, semisubmerged in a concrete vault system that provides secondary containment. The unit has a low potential for release to ground water, surface water, air, and on-site soils. No releases from this unit have been documented.

RELEASED 4/6/99  
DATE  
RIN # 634/99  
INITIALS MJ

ENFORCEMENT  
CONFIDENTIAL

**Recommendations:** No action is recommended.

**AOC 1 Chemical Warfare Burial Site**

**Conclusions:** The area was the site of buried military-style canisters of unknown content at a facility that might have manufactured mustard gas. The potential for release to environmental media is detailed below.

**Surface Water:** Low. The unit area contains no more canisters, so no potential currently exists for release of hazardous constituents to environmental media. Contaminated runoff would either percolate into soils or drain to the city sewer system.

**Ground water:** Low to Moderate. On-site soils potentially are contaminated, providing a source for ground-water contamination. According to facility representatives, site soils consist of tight, impermeable clays that likely would limit migration into ground water at the site (PRC, 1992).

**Air:** Low. Any waste was stored in sealed canisters which would limit air emissions.

**On-site soils:** Moderate. The possibility a release to on-site soils is moderate because there is no containment for the area. The canisters were buried in the ground. Any material released would have seeped directly into the soil.

**Recommendations:** No obvious evidence of any releases was observed; however, because of the uncertainty about the past mustard gas operations at the facility and the unknown content of the canisters, the possibility of on-site soil contamination should be explored. Soil samples should be taken from the area. Samples should be analyzed for thiodiglycol, a degradation product of mustard gas. Any contaminated soils found should be excavated and disposed of.

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- EPA, 1986b, letter to Ohio Rubber approving change in status to that of generator only (December 9).
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- Hazardous Waste Facility Approval Board, 1981, letter with attached copy of Hazardous Waste Facility Installation and Operation Permit No. 02-43-0301 (December 15).
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- Lake County, 1988, Air Pollution Complaint Investigation Report (October 4).
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- Ohio Department of Natural Resources, 1952, Ground Water Resource Map of Cuyahoga County, Ohio.
- Ohio Environmental Protection Agency (OEPA), 1982, interoffice communication approving modifications to Ohio Rubber's Permit #02-43-0301 (July 14).
- OEPA, 1983a, RCRA Interim Status Inspection Form (February 1).
- OEPA, 1983b, letter to Ohio Rubber listing violations discovered during February 1, 1983 inspection (February 11).



## REFERENCES (Continued)

- OEPA, 1983c, letter to Ohio Rubber acknowledging facility compliance (May 23).
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- OEPA, 1984b, letter to Ohio Rubber informing it of the expiration date of its Permit #02-43-0301 (August 9).
- OEPA, 1984c, Preliminary Assessment (August 16).
- OEPA, 1984d, letter to Ohio Rubber acknowledging facility compliance (September 28).
- OEPA, 1985a, handwritten notes on waste generation sources for Ohio Rubber (April).
- OEPA, 1985b, RCRA Interim Status Inspection Form (April 16).
- OEPA, 1985c, letter to Ohio Rubber listing violations discovered during April 16, 1985 inspection (May 16).
- OEPA, 1985d, letter to Ohio Rubber acknowledging facility compliance (August 22).
- OEPA, 1986a, letter to Ohio Rubber listing violations discovered during May 16, 1986 inspection (May 29).
- OEPA, 1986b, letter to Ohio Rubber acknowledging facility compliance (July 8).
- OEPA, 1986c, handwritten note concerning "quick closure" possibility (October 30).
- OEPA, 1986d, letter to Ohio Rubber withdrawing Ohio hazardous waste installation and operation permit and granting generator status with less-than-90-day storage (November 17).
- OEPA, 1986e, letter to Ohio Rubber listing violations discovered during December 16, 1986 inspection (December 23).
- OEPA, 1987a, letter to Ohio Rubber acknowledging facility compliance (January 15).
- OEPA, 1987b, letter to Ohio Rubber listing all permitted sources and their status (March 13).
- OEPA, 1988, Air Pollution Complaint Investigation Report (October 4).
- OEPA, 1990a, interoffice communication to file on complaint of odor emissions (July 27).
- OEPA, 1990b, interoffice communication to file on complaint of noxious smell (August 3).
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- Ohio Rubber, 1985a, letter requesting withdrawal of their hazardous waste transporter and storage permit (June 26).
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- U.S. Geological Survey, 1974, Flood-prone area maps.
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- U.S. Soil Conservation Service, 1981, Soil Survey of Cuyahoga County, Ohio.
- Williams, Arthur B., 1940, Geology of the Cleveland Region. Cleveland Museum of Natural History, Pocket Natural History No. 9.

**ATTACHMENT A**

**EPA PRELIMINARY ASSESSMENT FORM 2070-12**



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE OH 02 SITE NUMBER D004222378

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)  
Ohio Rubber Company

02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER  
3911 Ben Hur Avenue

03 CITY  
Willoughby

04 STATE  
OH

05 ZIP CODE  
44094

06 COUNTY  
Lake

07 COUNTY  
CODE  
085

08 CONG  
DIST  
11

09 COORDINATES: LATITUDE 41°38'30"N LONGITUDE 081°25'00"W

10 DIRECTIONS TO SITE (Starting from nearest public road)

From Cleveland, Route 2 east to Route 640 exit. East on 640 to Ben Hur Avenue, left on Ben Hur Avenue.

III. RESPONSIBLE PARTIES

01 OWNER (if known)  
Eagle Picher Industries

02 STREET (Business, mailing residential)  
580 Walnut Street

03 CITY  
Cincinnati

04 STATE  
OH

05 ZIP CODE  
45202

06 TELEPHONE NUMBER  
(513) 629-2418

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

- ☒ A. PRIVATE ☐ B. FEDERAL: (Agency Name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL  
☐ F. OTHER (Specify) ☐ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

- ☒ A. RCRA 3010 DATE RECEIVED: 08 / 08 / 80 ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 08 / 04 / 81 ☐ C. NONE  
MONTH DAY YEAR MONTH DAY YEAR

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

BY (Check all that apply)

- ☒ A. EPA ☒ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR  
☒ YES DATE 02/11/92 ☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: (Specify)  
☐ NO

CONTRACTOR NAME(S): PRC Environmental Management, Inc.

02 SITE STATUS (Check one)

- ☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1918 | 1991  
BEGINNING YEAR ENDING YEAR ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Spent halogenated solvent, spent acid wastes, paint wastewater, latex- and solvent-based paint sludge, condensate wastewater, wastewater sludge, solvent/water sludge, and water/solid waste.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The potential is low for a release of hazardous constituents to ground water, surface water, air, and on-site soils from most of the solid waste management units at the facility. The probability that there may have been past releases of hazardous constituents to on-site soil is moderate and to ground water is low-to-moderate for the old drum storage area because of the lack of containment.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)

- ☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☒ C. LOW (Inspect on time-available basis) ☐ D. NONE (No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT  
Kevin Pierard

02 OF (Agency/Organization)  
U.S. EPA

03 TELEPHONE NUMBER  
(312) 886-4448

04 PERSON RESPONSIBLE FOR ASSESSMENT  
Deborah Lyne

05 AGENCY

06 ORGANIZATION  
PRC-EMI

07 TELEPHONE NUMBER  
(703) 883-8408

08 DATE  
01/31/92  
MONTH DAY YEAR

4163  
clean



**ATTACHMENT B**

**VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS**

## VISUAL SITE INSPECTION SUMMARY

Ohio Rubber Company  
Willoughby, Ohio  
OHD004222378

Date: February 11, 1992

Facility Representatives: Paul D. Harper, Director of Environmental Affairs and Safety,  
Eagle Picher Industries  
Charles W. Jones, Executive Director/Human Resources, Eagle  
Picher Automotive Group

Inspection Team: Dave Phillips, PRC Environmental Management, Inc. (PRC)  
Deborah Lyne, PRC

Photographer: Deborah Lyne, PRC

Weather Conditions: Windy, snowy, temperature about 32°F

Summary of Activities: The visual site inspection (VSI) began at 9:55 a.m. with an introductory meeting. The inspection team discussed the purpose of the VSI and the agenda for the visit. Facility representatives then discussed the Ohio Rubber facility's past and current operations, solid wastes generated, and release history. Most of the information was exchanged on a question-and-answer basis. Ohio Rubber representatives provided the inspection team with copies of a site layout diagram and process flowchart.

The VSI tour began at 11:30 a.m. The tour began in building B which contains the banburies and the former location of the degreaser unit. Buildings C and D contained some storage and a few spray booths. Outside, to the north of building D, the PRC inspection team observed and took photos of SWMU 2, the old drum storage area. The tour then moved to SWMU 4, the underground storage tank. SWMU 5, the tank farm to the northeast of the plant was observed and photographed next. The facility representatives pointed out the approximate location of the surface impoundment, SWMU 1, beyond the facility fence; photos of the area were taken. SWMU 7, the wastewater treatment plant, was examined and photographed. The tour then continued into building 53, the location of the reclaiming operation. SWMU 3, the new drum storage area, is located outdoors to the east of the facility. No satellite accumulation areas, SWMU 6, were observed during the VSI because they had been removed.

The tour concluded at 1:15 p.m., after which the inspection team held an exit meeting with Paul Harper and Charles Jones. The VSI was completed and the inspection team left the facility at 1:40 p.m.



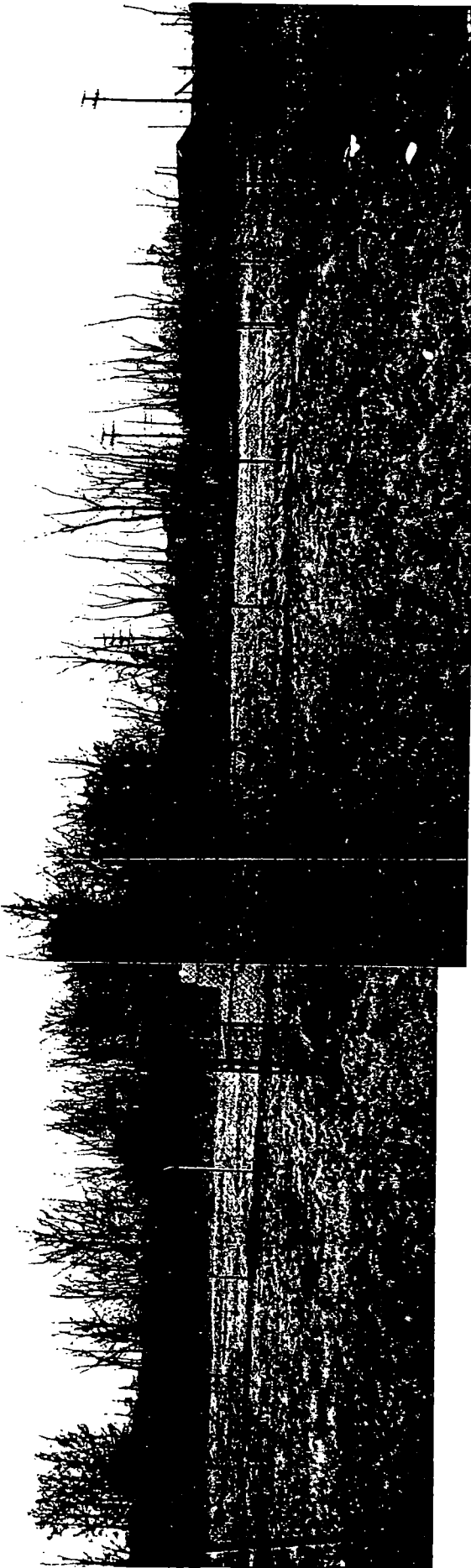
**Photograph No.** 1

**Orientation:** East

**Description:** View through fence of location of the surface impoundment

**Location:** SWMU 1

**Date:** February 11, 1992



Photograph No. 2

Orientation: East

Description: Panoramic view of the location of the surface impoundment

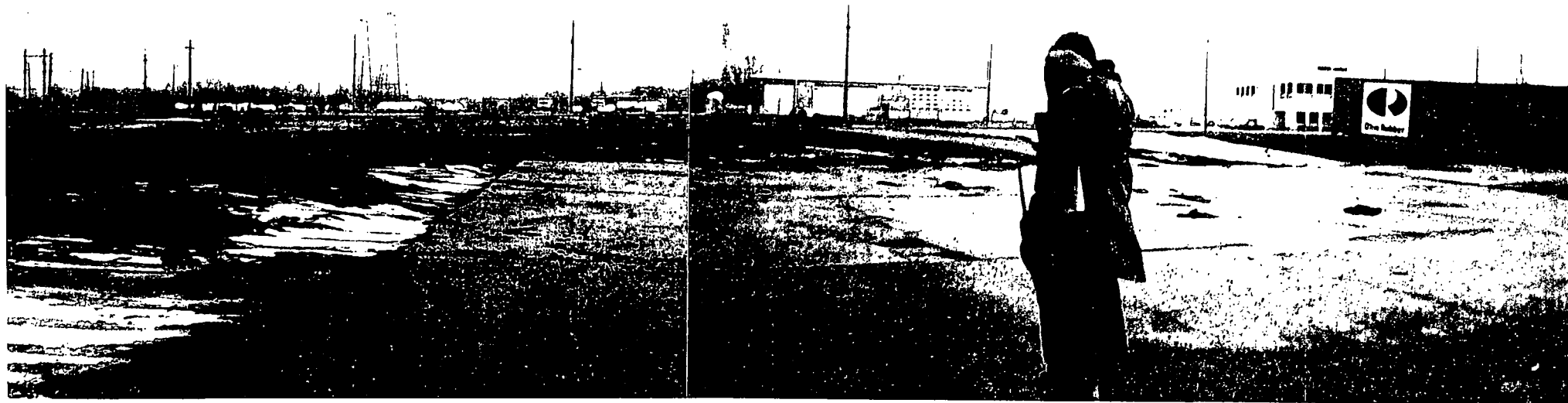
Location: SWMU 1  
Date: February 11, 1992





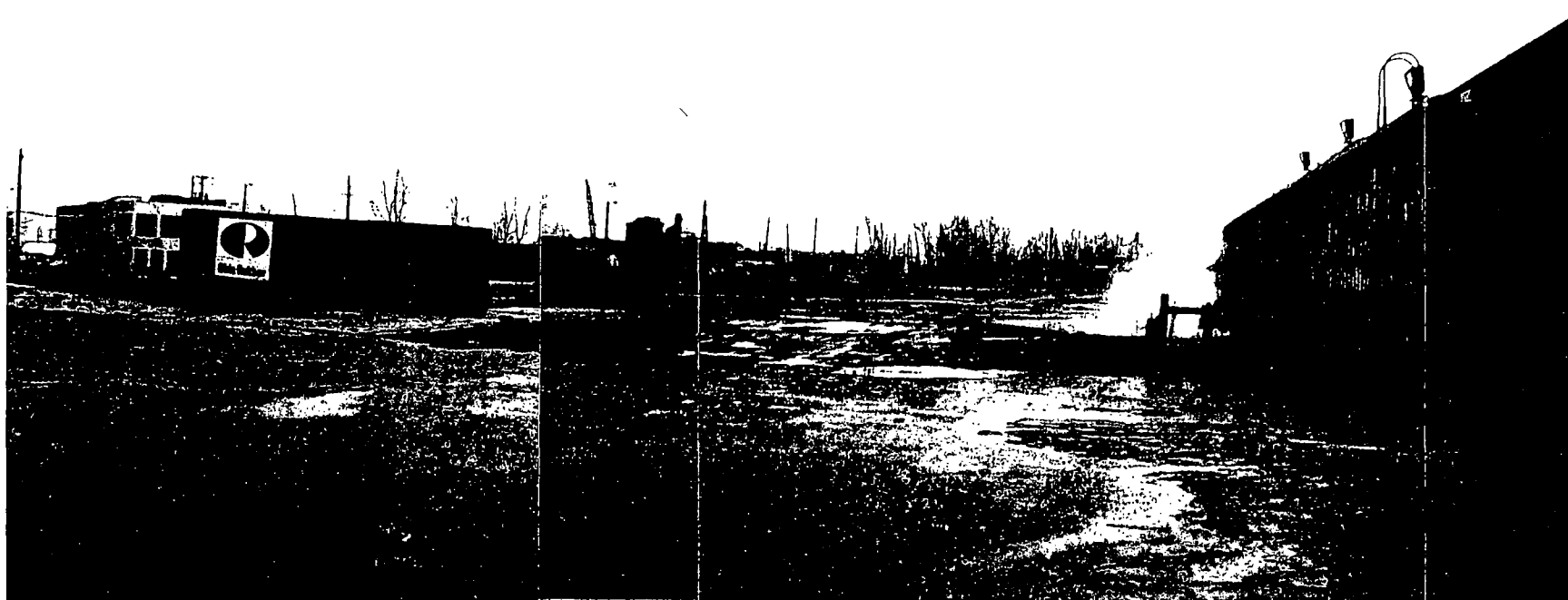
**Photograph No.** 3  
**Orientation:** Northwest  
**Description:** Panoramic view of old drum storage area (section 1)

**Location:** SWMU 2  
**Date:** February 11, 1992



Photograph No. 4  
Orientation: North  
Description: Panoramic view of old drum storage area (section 2)

Location: SWMU 2  
Date: February 11, 1992



**Photograph No.** 5  
**Orientation:** Northeast  
**Description:** Panoramic view of old drum storage area (section 3)

**Location:** SWMU 2  
**Date:** February 11, 1992



**Photograph No.** 6

**Orientation:** Southeast

**Description:** View looking back at facility across old drum storage area

**Location:** SWMU 2

**Date:** February 11, 1992



**Photograph No.** 7

**Orientation:** Northwest

**Description:** View of new drum storage area

**Location:** SWMU 3

**Date:** February 11, 1992



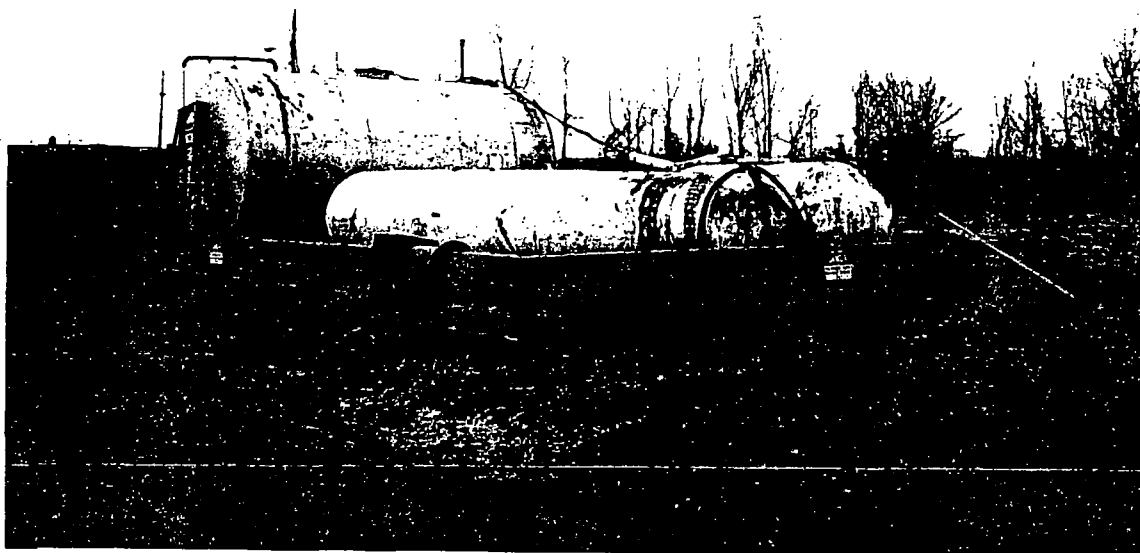
**Photograph No. 8**  
**Orientation:** Northeast  
**Description:** View of new drum storage area

**Location:** SWMU 3  
**Date:** February 11, 1992



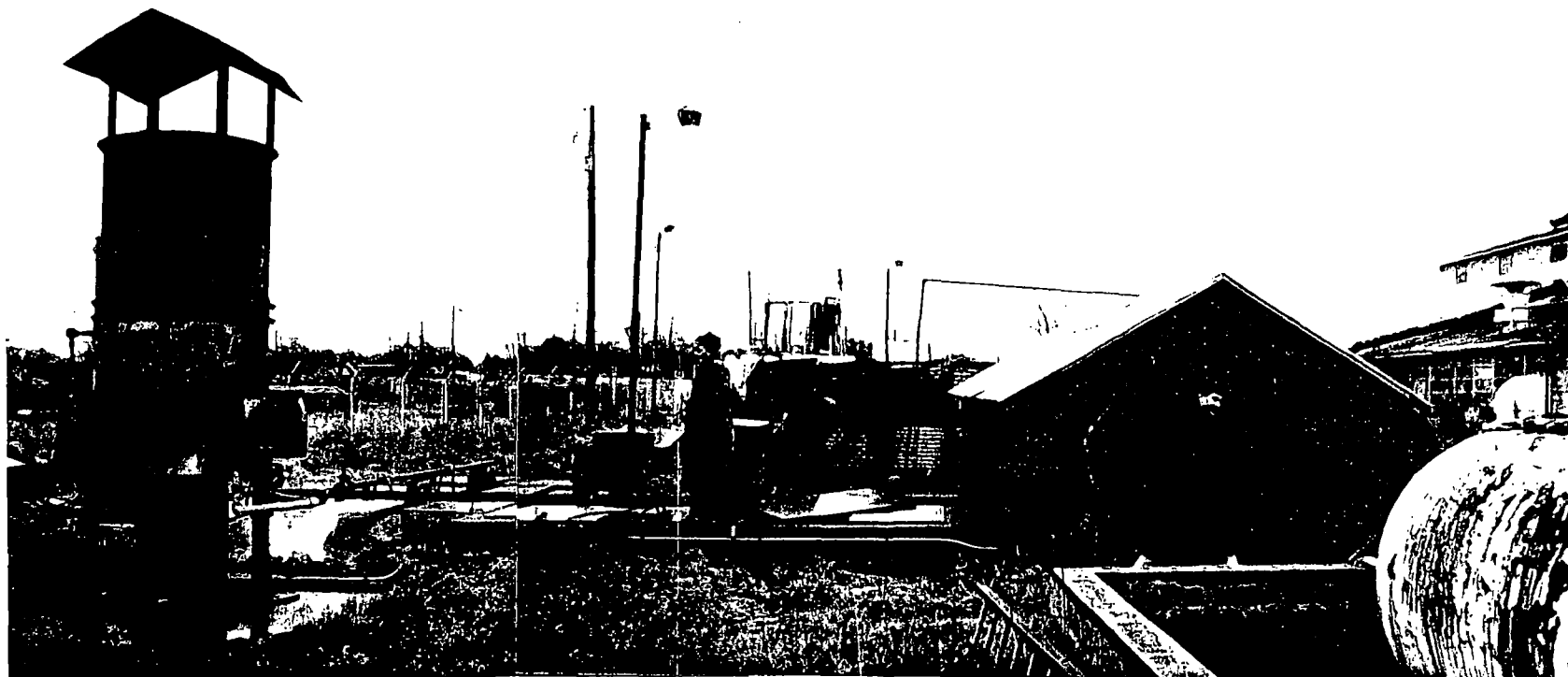
**Photograph No. 9**  
**Orientation:** Northeast  
**Description:** Top of underground waste storage tank

**Location:** SWMU 4  
**Date:** February 11, 1992



**Photograph No.** 10  
**Orientation:** Northeast  
**Description:** View of tank farm

**Location:** SWMU 5  
**Date:** February 11, 1992



**Photograph No.** 11  
**Orientation:** East  
**Description:** View of wastewater treatment plant

**Location:** SWMU 7  
**Date:** February 11, 1992



**Photograph No.** 12  
**Orientation:** West  
**Description:** View of wastewater treatment plant

**Location:** SWMU 7  
**Date:** February 11, 1992



**ATTACHMENT C**  
**VISUAL SITE INSPECTION FIELD NOTES**

(106)

2-11-92

DS

Arrived at Facility 10:00 AM

Ohio Rubber - Chuck Jones

Paul Harger

PRC EMI - Deb Lynn

Dave Phil, Jr

Mid-30's - Overcast - Sleet/Snow

- Discussed purpose of visit

- Ohio Rubber provided us w/ a map of the facility  
Site always been a rubber plant.

Plant built in the early 1900's.

(A) and (B) original buildings

(Q1, Q2, Q3, (J, K) no longer present

Last major expansion (Q) <sup>1960's</sup> <sup>PSP</sup> in  
the 1980's (F and G) Administrative  
offices in 1970'sManufacturing peak in early 1980's  
or actually during WWII

750 people employed during the

1980's - 57 acres entire site

Another tenant operation may

2-11-92

DS

(107)

have occurred by the coal pile  
during the 1950's - peroxide  
manufacture - only operation known  
to have taken place besides the  
rubber manufacturing operations  
- Eagle Picher grained Ohio Rubber  
around 1950- Same manufacturing processes  
since plant construction - reclaim  
process started during the 1930'sFacility was designated as a  
preproduction facility for mustard  
gas during WWII. Sometime  
during the 1950's during construction  
onsite - discovered some glass  
containers that may have been  
mustard gas. Further investiga-  
tion onsite has not discovered  
or detected any containers containing  
mustard gas - Lower part of (A)  
on map provided by Eagle Picher

(108) 2-11-92 D8

Old surface impoundment  
1960s - 1972 old natural depression  
reclaim blowdown (from auto  
clawer) were routed to the  
impoundment and evaporated  
Unknown whether the impound-  
ment was filled or where the  
fill came from.

### Plant Operations:

Ohio Rubber provided us w/ a process  
flow diagram of the facility  
Raw materials were brought in  
mixed went through mulling  
and rolling operations then  
went through presses and  
injection molding - trimmed  
some assembly, painting;  
and backing to the motor

2-11-92 D8

### Products:

Car Mats  
Other rubber products

### Raw Materials:

Rubber, plasticizers

Raw (virgin)

Reclaim Operations

Trim Cuttings

Tire Buffings  
(obtained  
offsite)

Devulcanize the rubber purpose  
of the reclamation process

Blowdown → went through a condenser  
and chiller Condensed  $H_2O$  was  
treated in a biological unit and  
 $H_2O$  discharged to City Sewer  
Non condensable gases were  
vented to an incinerator (odor  
control)  
(co-fired w/ natural gas) Unit  
operations occurred near reclaim bldg.

110. 2-11-92 DP

oil from oil/water separator -  
 was sent off-site for reclamation  
 at meeting with Mr. Larkin (Larkin  
 - Former Regenerator pit was located  
 in Building B (11, 1 DE solvent)  
 - Flushing Process

Products many of wastes included  
 in Part A.

④ Degreasing Operations  
 ⑤ Painting Booth (Spray booth)  
 Latex  
 VOC/solvent-based adhesives  
 system

→ Wastewater sent directly to the  
 City Sewer - paint sludges slurred  
 and sent to vacuum disposal fast  
 filter.

③ Acid (or corrosive waste) may  
 have been generated from Tinting

2-11-92 DPO

Boiling Borel (i.e., Borel  
 Blowdown)

Drum Storage Areas

2 areas identified at the facility  
 1st area North of Bld. 17-A  
 6 area, drum storage occupied  
 3 area - not paved, fly ash  
 on bottom ash covered using  
 for hazardous waste in 1986  
 has been also used for oil  
 storage and dry material storage  
 containers storage on pallets

2nd area  
 - no burning

located by Q Building; max.  
 storage = 100 drums - singly stacked  
 paved and burned - 1986 audit  
 only place where hazardous waste

(113)

2-11-92 BG

Non Hazardous Waste  
Packaging materials (mostly clay)  
obtained in bag house  
like plant waste

Waste oils from hydraulic systems and maintenance -  
contained and sent to a  
recycling facility

Wastewater 5"

When first went to storm-sewer  
proceed waste water went to  
city sewer (i.e. spray booth  
waters)

Runoff enters storm sewer located  
throughout city

Regulating Agreements

Dis permits =

Mostly covered some patches  
emitting operations, odor control,  
cover-gined boilers.

2-11-92 OR

has been stored - not being  
used currently

Facility has been systematically  
shut down - since August 1991

Inventory has been drawn down  
Facility was shut down Oct 18,  
1991, making area in about  
1 month thereafter. Facility has  
been undergoing shut down since

Small scale operations associated  
with rubber-bonding to metal  
(acc. w/ vapor degreasing and  
possibly conversion coating)

Referrals

Referrals to pet. April in May,  
1982.



(114)

2-11-92 JS

32- PCB Transformers Bulk  
located in (26) and switch house  
and some telephone pole  
Use PCB-storage

Satellite Accumulation area  
located inside several buildings  
exact locations unknown probe -  
by near paint booth other  
parts of details

UST 2200 gal.  
filled w/ sand in 1986

Above ground Storage Tanks

Actually <sup>PSP</sup> 2 pipes where above -  
ground tanks are located at  
the facility 2 tanks (10,000 -  
15000 gal cap.) stored fuel oil  
for boiler located down  
by machine shop

(115)

2-11-92 JS

2 tanks (6000 gal - cap) stored  
raw material (ie reclaim  
oil brought in from off-site  
source) used in reformulator  
process.

Waste Oil Tanks (LP tanks)  
received the oil separated  
from reclaim flow-down  
operations (3 = 1000 gal tanks  
1 - 2000 gal tank)

Began using the tanks in 1982,  
but were not in used before.  
(ie the tanks existed before 1982  
but were not being used) - it  
appears that the use of the  
LP tanks coincides w/ the  
discontinued use of the 2200 -  
gal UST to store waste oil.  
dike - poured concrete bottom

(116)

2-11-92 DSD

cinder block wall (3ft-high)

Concluded ~~Pre~~ briefing at 11:40AM

Began tour of the facility at 11:45AM

Looked at Bunker ~~Storage~~ tanks  
and unloading area.

Former location of the Vapor

Depressor + Concrete Floor <sup>Inside Building B</sup>  
storage of empty ~~tank~~ <sup>occurrence</sup>  
this area is not used.

Pan + Spray Booths

Fishers; Plastic-Shedding living booth

Drum Storage Area

Northern perimeter of plant  
gravel and fly bottom

South shot of drum storage area  
Open area - no containment

PSB

2-11-92 DSD

(117)

Location of VST - 2:00pm  
not known whether ~~linker~~ <sup>linker</sup> vaults of  
unknown start up ~~linker~~

Unknown Storage Tanks

Probably stored fuel oil or  
possibly propane + not used for  
some time during - gravel  
no concrete pad

LP Tank Farm

4 horizontal mounted tanks  
cinder block dikeing  
concrete pad

No signs or cracks observed  
Tanks are mounted on railroad  
ties

Impoundment

Unfenced area where impoundment  
was located

(118)

2-11-92 DFP

Waste H<sub>2</sub>O Treatment

vaulted tanks concrete construction

semi-submerged / above & underground  
odor incinerator pipingPackaged plant w/ activated  
sludge system

little sludge produced -

scooped out by hand and

containerized - disposed off-  
site.

DFP

Oil Storage Tanks2-10,000 gal. tanks oil for  
reclaim process

Mounted on cement supports

concrete pad and oblong

+ horizontally-mounted tank

filling station trough

some storage near filling  
station

2-11-92 DFP

(119)

Hazardous Waste Drum Storage  
Area 1986

- No sumps or drains inside containment area.
- concrete pad + asphalt + coating +
- Asphaltic beam <sup>resistant</sup>
- pad slightly sloped to the
- north end

Concluded Tour of facility at 1:30pm

Exit Tour <sup>DSP</sup> Briefing began @ 1:35pm

Concluded Exit Briefing at 1:45pm

Left facility at 1:45 pm

DFP  
2-11-92



1 2/11/92  
9:55 a.m.

OTTO ROBER (EAGLE PITCHER)

PAUL HARPER  
CHARLES JONES.

EAGLE PITCHER

Paul D. Harper

Director of Environmental  
Affairs and Safety  
Eagle-Picher Industries, Inc.

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(513) 629-2418  
FAX: (513) 721-3404

## EAGLE-PICHER AUTOMOTIVE GROUP

Charles W. Jones  
Executive Director/Human Resources

MAT DIVISION  
3911 BEN HUR AVENUE • WILLOUGHBY, OHIO 44094  
216-942-0500 • FAX 216-951-8371 • TELEX 98-5294

divisions of  
EAGLE PITCHER

DB

2/11/92 DCL

2

CONFERENCE BRIEFING

AFTER 1982 DATE DIDN'T MANAGE/STORE  
WASTE IN THOSE AREAS SO "QUICKIE  
CLOSURE" IN 1986 (LETTER)

PROPERTY UP FOR SALE. AS ONE  
UNIT OR PARCELED UP

### HISTORY

JULIO RUBBER COME INTO BEING.  
PLANT FOUNDED 1900.

Q1, Q2, Q3, J, K TORN DOWN  
A+B ORIGINAL BUILDINGS

ALWAYS RUBBER. THEN EXPANDED

G WAREHOUSE LOST MATRIL EXPENSE

Q4, Q5 + N. 1930-40

3 <sup>202</sup>  
N/11/12 D2

C-D 40's + 50's

DOWN OFF 70's

PEAK OF MANUFACTURING 1980 <sup>DE</sup>

= 2ND WORLD WAR.

OTHER OPERATION - NEAR COAL PILE

INCLUDING BARIUM PEROXIDE

MANUFACTURE INCLUDING

BEARING KILNS 50's

EXHAUST PIPES ACQUIRED DUTY

Ryabov = 1950

SAME PROCESS SINCE BEGINNING

ONLY ADDITION 30's + 40's

RECLAIMING PROCESS.

<sup>DE</sup>  
SURFACE IMPOUNDMENT - WAR

STOCKS FROM 1st WORLD

WAR - PRE PRODUCTION FACILITY

<sup>202</sup>  
N/11/12 D2

4

FOR MUSTARD GAS - NEVER WENT  
INTO PRODUCTION - VERY SECRET.

<sup>DE</sup>  
IN 50's WHILE DOING CONSTRUCTION  
CAME ACROSS GLASS CONTAINERS

ARMY CAME AND REMOVED - NEVER  
DETERMINED CONTENTS FROM  
ARMY.

FACILITY HAS DONE WORK TO  
FIND ANY EVIDENCE OF CONTAINERS  
GPR - NOTHING DETECTED.

IMPOUNDMENT

1980 REPORTED

1984 EP

<sup>DE</sup>  
MID 60's TO 1972 - NATURAL

DEPRESSION - RECLAIM PROCESS

BLOWDOWN FROM DUST CLOUDS

ROUTED TO IMPOUNDMENT

5 <sup>200</sup> N/1/92 DEL

FOR EVAPORATION. NOW USE  
CONDENSER PROCESS.

STOPPED USING IT BUT DON'T

KNOW ABOUT FILL WHETHER

USED FILL AND NATURE OF

SOURCE OF FILL - HEAVY FILL:

100% FILL IDENTICAL

- LOWER END OF BLDG A - WHERE

WAS PRODUCTION LOSS

= 1918 NEWSPAPER ARTICLE

REFERENCING OCEAN DUMP.

BUT FACILITY NEVER WENT INTO

PRODUCTION.

### OPERATIONS

SEQUENCE FLOW CHART / PROCESS

FLOW DIAGRAM

DEL

6 <sup>200</sup> N/1/92 DEL

RAW MATERIALS BROUGHT IN  
MIXED DOWN IN BANBURIES.

DEL

SOME INJECTION MOULDING.

TRIMMED → STORAGE

SOME ASSEMBLY OF CAR MOT'S

INCLUDING LAMINATION

OF FIREWALL BACKING,

PAINTING

DEL

RAW MATERIALS COME INTO

STORAGE.

RAW RUBBER OR

FROM RECLAIM DEPT.

DEL

RECLAIM → OFF OF TRIM FROM

PROCESS + FROM TIRE BOFFING

PURCHASED FROM OUTSIDE

DECAKINIZED RUBBER.

2<sup>nd</sup>  
7/11/92 DEL

MIXED W/ PERTIZER + REDEM

OIL PURCHASED PUT INTO  
AUTOCLAVE COOKED AT  
HIGH TEMP + PRESSURE.

BLOW DOWN AUTOCLAVES ROUTED  
THRU CONDENSER THEN  
CULLER TO DEL WATER  
SEPARATOR WWTP TO  
POTW.

OFF GASES FROM OTHER  
WENT OVER TO A FLARE -  
MIXED W/ NATURAL GAS  
+ BURNED FOR OODR CONTROL

~~DEL~~

RUBBER AFTER AUTOCLAVE  
LAKE BREAKER THROUGH  
GRISTERS + SIFTERS (CLAYS  
MUS  
ADD) THRU CALENDERS +  
SHEETERS TO MIX TOGETHER

2<sup>nd</sup>  
7/11/92 DEL

8

TO PRODUCE VERY FINE  
SHEET - TO PELLETIZER.

PELLETS COATED W/ CLAY THEN  
BAGGED + STORED

AT ONE POINT AIR SHOOTER  
SENT PELLETS TO PELLET  
STORAGE AREA. NOW TOTE  
+ BIN SYSTEM.

~~DEL~~

WWTP NEXT TO BLOG N  
NONPDES - NO SURFACE WATER  
DISCHARGES.

CITY SEWER PERMIT.

CDD EXCURSIONS FROM WWTP  
AN EFFICIENCY ISSUE. ONLY  
PERMIT PROBLEM PH PROBLEM  
FROM BLOWOFF FROM BOILERS.

~~DEL~~

9 <sup>202</sup> 11/1/82 DB

ONLY WASTES:

RECLAIM - 3 PHASED OIL

WATER

NON-CONDENSABLES

OIL RECLAIMED ~~FROM~~ STORED

IN TANK FARM SENT OFF SITE

FOR RECLAMATION, TANK FARM

N.E. OF BLDG N.

WAS ORDINATE OIL NOW

DIAPHOTIC OIL CHANGED ~~FROM~~

FOR JOOR CONTROL

~~DB~~

BANBORIES LOCATER NEAR #38

~~2ND FLOOR~~

3RD FLOOR MATERIAL STORAGE

TO BANBORIES ON 2ND FLOOR

TO MILLING/HOMOGENIZING

OPERATION.

<sup>202</sup> 11/1/82 DB 10

TO PRESSURE TO MAKE MOTO

TURN GOING TO CURING TRPT.

- FORMER DEGREASER PIT

IN BLDG B NEED METAL PREP

DREA. 1,1,TRICHLOROETHANE

~~DB~~

FINISHING PROCESS

SEVERAL VARIETIES

- DEGREASING

- SPEED BOOTS (MOTION LATEX)

SOME VOC BASED ADHESIVE

SYSTEMS. ALL WATER WASH

WATER-FALL WATER TO

CITY W/O PRETREATMENT.

SLUDGE WAS DRUMMED AND

TAKEN OFF-SITE FOR DISPO

USED FLOCCULENT TO BRING

SLUDGE TO SURFACE.

~~DB~~

PAINT  
SLUDGE

WASTE SHIPPED OFF AS HAZARDOUS

WASTE - DRUMMED

- DRUMS MAY BE FOR BOTTLER

BLOWN DOWN

BLOG. CHD - SOME SMALL AUTOCANES  
FOR PREHEATING IN COILING OPERATIONS

- 2 DRUM STORAGE AREAS

1) BACK OF 17A

2) WHERE Q3 + Q2 USED TO BE  
DQ

FIRST ONE - NEVER "CLOSED" BECAUSE

DIDN'T STORE ANYTHING AFTER

1982 - POTENTIAL CAPACITY 10,000

DRUMS - BUT NEVER REACHED THAT.

- VERY TIGHT CHDY SOIL

202 11/11/12 DQ

120,000 SQ. FT. FOR 15

DRUM STORAGE AREA. NOT

POULD FLY DOWN ON GROUND

USED ALSO ~~TO~~ TO STORE  
THERMALS.

USED UNTIL 1986 FOR  
HAZ. WASTE STORAGE.

HAS BEEN USED THEN FOR

LOW MATERIAL + NON-HAZ.

WASTE STORAGE.

STORAGE ON PALETS - NO

BURNING

BEGINNING STORAGE DATE

UNKNOWN

702

- OTHER STORAGE AREA. PROVED

PERMITS 2100 DRUMS (W)

ALSO SPOCC, SINGLE <sup>001</sup> STACKS

13 <sup>202</sup> 12/1/92 DB

CONSTRUCTED IN 1986 NOT IN  
USE NOW.

SINCE 1986 TRIED TO ELIMINATE  
H2O2 WASTE - CHANGE PROCESSES  
TO REDUCE

RECLAMATION AREA TANK FARM 4 TANKS

~~DB~~

IN JANUARY 1990 CHANGED - KETKUT

SINCE AUGUST INVENTORY BEEN

REDUCED FACILITY SHUT DOWN

OCT 18, 1991 MIXING AREA

RAN FOR 1 MONTH TO PRODUCE

RUBBER SINCE THEN PROCESS

SHUT DOWN

~~DB~~

MAY HAVE BEEN SMALL SCALE

METAL / RUBBER BONDING

USING ACIDS CHROMIC ACID

<sup>202</sup> 12/1/92 DB 14

MENTIONED IN FILE - MAY BE  
USED IN INDUSTRIAL MAN  
DECA

~~DB~~

- HYDROCHLORIC ACID FROM CLEANING  
OF ROLLERS.

- ANY SPILLS - MAY HAVE BEEN TANK  
DUGILLING SPILLS

- FILL DATED MAY 1982 PERC

SPILL - FAC. PERC NOT AWARE

USED PERC AT FACILITY - MAYBE

USED AS DEGREASER BUT NOT IN

TANK STORAGE

~~DB~~

SOME PARTICULATE COLLECTION IN

BAGHOUSES - NONE HAZARDOUS

- FDC USED LOT OF WASTE

CELLS FOR FDC MAINTENANCE

DRUMMED + STORED IN ~~UNDERGROUND~~

15 2/11/92

DB

DRUM STORAGE AREA - AT SITE  
FOR RECLAMATION.

- NON CONTACT COOLING WATER  
TO STORM SEWER.

- BOILER BLOWDOWN.

- SMALL CONDENSATOR IN  
ADJEN. OFFICES FOR WATER  
MANUFACTURE TO ~~LOW~~ POTW

~~DB~~

REGULATORY HISTORY.

PART A SUBMITS AND REVIEWED  
THROUGH '85 '86 GENERATOR  
& 90 DAY STORAGE.

- RUN OFF DISCHARGES TO  
STORM SEWER.

- HAD AIR PERMITS FOR  
VARIOUS SOURCES BUTLERS  
WHEN CALIFRERO STILL

2/11/92

DB

16

WHEN CONVERTED TO GEOS.

FIRED.

AUTOCHSUS PERMITTED - PRIMARILY  
DUE TO ODD.

- FACILITY NOT CONSIDERED A  
MAJOR SOURCE NO MOTOR

SOURCE TESTING

32 TRANSFORMERS - ALL PCBs

BULK LOCATED IN (26) POWER  
HOUSE. NO TRANSFORMERS

HAVE BEEN REMOVED RECENTLY.

NO SPILLS DOCUMENTED OTHER  
IN SWITCHHOUSE + POLES.

~~DB~~

PROBABLY SOLVENT ACCUMULATION

AREAS BUT UNSURE + LOCATIONS

UNKNOWN. PERHAPS NEAR SMALL

MOLDING DECKS AND SPENT FIBERS



17 2/11/92

DL

TANKS

- 2,800 GALLON UST N.W. OF

Bldg. "N" - CUSTOD. NOT

REMOVED - WASTE OIL

- 12,000 GALLON TANKS - 2-6,000

GALLONS AT CULVERT FOR

OIL

- 2 10,15,000 GALLON FOR

FUEL OIL

UST - IN REAR. NOT SURE OF

LEAKAGE. STILL IN PLACE. INVERT

FILLED - USED FOR WASTE OIL

STORE. ALL KINDS NOT REMOVED

(FROM RECYCLING PLANTS)

TANK. (ARM) (3,100 GALLON

TANKS + 1 2,000 GALLON TANK)

STARTED OPERATIONS ABOUT '82

BUT ONLY ACCEPT RECYCLING

WASTE. OTHER IS DEEMED

8/11/92 DL

AND STORED FOR OFF SITE DISPOSAL

POURED CONCRETE FLOOR + 3 3/4

FEET. WIDE -

DL

REMOVED. REMOVED BY 11 30

BEFORE SITE TOUR -

DL

2,100 B

2 PLS. BANGOR FLOOR 4 BANGOR

2/10/92

2nd floor (1st floor) material storage

REMOVED. WASTE OF 10

REMOVED. MATERIALS COLLECTED

10,000 GALLONS OF WASTE OIL

STILL IN PLACE. INVERT

2,100 B

2 PLS. BANGOR FLOOR 4 BANGOR

2/10/92

2nd floor (1st floor) material storage

REMOVED. WASTE OF 10

14

27/11/92

DB

CONCRETE FORMS - 3.11.1

SEEK INFORMATION FROM RIVER

19.00 BDC (

SUPPLY RAIL - PLANT LIFT

RESOURCES FOR FURTHER ACTION

END OF THE

CERTAIN OVER

RAIL D

11.05.15 PERMANENT

BACK DOWN STORAGE AREA

CONCRETE DIRT

PROVIDE FOR FURTHER BACK DOWN

END

PHOTO 1 - RAIL BRIDGE, SOUTH

PHOTO 2 - RAIL BRIDGE, NORTH

CONCRETE BRIDGE

2 TANKS ROSSBY USED

2 MORE TANKS (?) TANKS

DIV 500 BOT EX REPRESENTATIVE

ALL NOT SURE OF USE

27/11/92 DB

19.00 BDC (RAIL FORM)

19.00 BDC (RAIL FORM)

CONCRETE FORMS - 3.11.1

IS PUMPED OUT WHEN FULL

W/RAIN WATER - NO DRAIN

OR DUMP

20

21 2 7/11/98 22

RE 10/11/00

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

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| 11 | - | מחירי חומרי גלם | הוצאות |
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13-13 4.75

NOTE WATER TREATMENT PLANT

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1177

10. אברהם ושרה

1770-1778: War of 1812

Handwritten: 21 - 870505

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2010-11-11 7:15 PM

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| (שנה) | ז | ה'תשנ"א | חודש |
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(2) LEFT E

03 2/11/02

RECEIVED - 2/11/02

PURCH 14100

RECEIVED - 2/11/02

4 AGGREGATES

20 CUBIC YARDS

IN AND DOWN TO 100000

FROM STORAGE AREA

MOVED TO 100000

NO DUMPING OR SLURPS

REMOVED BASE OUT OF

CONCRETE

PURCH 21100 FROM STORAGE

AREA

4 OIL TANKS 4 TONS

IN CONCRETE BASED PUD

5 67 TON BEAM

2/11/02

SITE TOUR OVER AT 115

RECEIVED

1 35 BEAM 1140 END

132